

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

ORIGINAL MANUAL ISSUE DATE: 8/2001

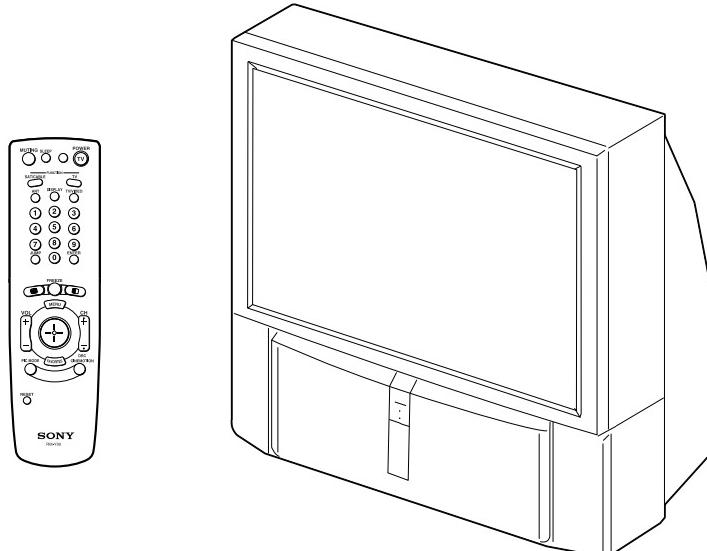
ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
8/2001		No revisions or updates are applicable at this time.
11/2001	Correction - 1	A Board P/N Corrected
1/2002	Supplement - 1	New CRT Introduced - Affects S/N's 9000001 - 90XXXXXX
2/2002	Supplement - 1	Reissued to show corrected Page 26
5/2002	Correction - 2	U Board P/N Corrected on Electrical Parts List - Page 106
8/2002	Correction - 3	Correction to Exploded View Cover parts list to indicated location and new part numbers for Screen Holders - Page 95
12/2002	Correction - 4	Electrical Parts List - P/N Correction on D Board
7/2003	Correction - 5	Electrical Parts List - P/N Correction/Addition on G Board - Page 128-130
11/2003	Supplement-2	Note added to clarify correct CRT replacement Part Number depending on S/N range

COLOR REAR VIDEO PROJECTOR
SONY®

SERVICE MANUAL RA-6 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A				
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A				
KP-57HW40	RM-Y909	US	SCC-P65F-A				
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A				



RM-Y909

KP-51HW40/57HW40

COLOR REAR VIDEO PROJECTOR
SONY®

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line; the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

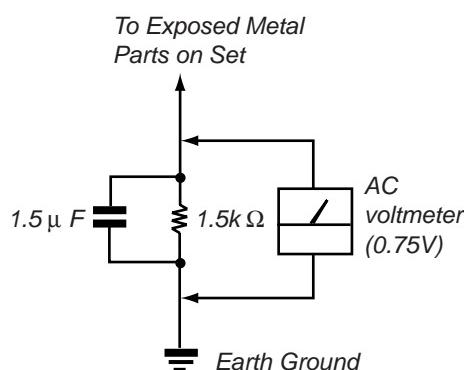


Fig. A. Using an AC voltmeter to check AC leakage.

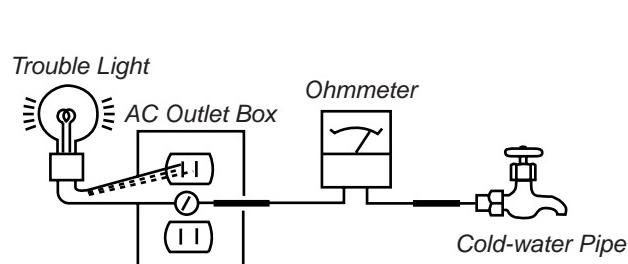


Fig. B. Checking for earth ground.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE.

LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE \triangle SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDICUIT DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. SELF DIAGNOSIS FUNCTION 5					
2. DISASSEMBLY					
2-1.	REAR BOARD REMOVAL	8	5-1.	HV REGULATION CIRCUIT CHECK AND ADJUSTMENT	33
2-2.	CHASSIS ASSY REMOVAL	8	5-2.	HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT	33
2-3.	SERVICE POSITION	8	5-3.	+B MAX VOLTAGE CONFIRMATION	33
2-4.	H2 BOARD REMOVAL	8	5-4.	+B OVP CONFIRMATION	33
2-5.	H1 BOARD REMOVAL	9			
2-6.	H3 BOARD REMOVAL	9			
2-7.	MIRROR COVER REMOVAL	9			
2-8.	BEZNET ASSY REMOVAL	9			
2-9.	H4 BOARD AND S BOARD REMOVAL	10			
2-10.	AD BOARD AND B BOARD REMOVAL	10			
2-11.	G BOARD REMOVAL	10			
2-12.	A BOARD, D BOARD AND U BOARD REMOVAL	10			
2-13.	PICTURE TUBE REMOVAL	11			
2-14.	HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL	11			
3. SET-UP ADJUSTMENTS					
3-2.	SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)	12	6-1.	BLOCK DIAGRAM (1)	34
3-1.	SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)	12		BLOCK DIAGRAM (2)	35
3-3.	DEFLECTION YOKE TILT ADJUSTMENT	12		BLOCK DIAGRAM (3)	36
3-4.	FOCUS LENS ADJUSTMENT	12		BLOCK DIAGRAM (4)	37
3-6.	2-POLE MAGNET ADJUSTMENT	13		BLOCK DIAGRAM (5)	38
3-5.	FOCUS VR ADJUSTMENT	13		BLOCK DIAGRAM (6)	39
3-7.	CENTERING MAGNET ADJUSTMENT	13		BLOCK DIAGRAM (7)	40
3-8.	4-POLE MAGNET ADJUSTMENT	13		BLOCK DIAGRAM (8)	41
3-9.	DEFOCUS ADJUSTMENT (BLUE)	13		BLOCK DIAGRAM (9)	42
3-10.	ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER	14		BLOCK DIAGRAM (10)	43
				BLOCK DIAGRAM (11)	44
4. CIRCUIT ADJUSTMENTS					
4-1.	P & P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)	31	6-2.	CIRCUIT BOARDS LOCATION	45
4-2.	P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)	31	6-3.	SCHEMATIC DIAGRAMS	45
4-3.	P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)	31	6-4.	PRINTED WIRING BOARDS	74
4-4.	P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)	31	6-5.	WAVEFORMS	88
4-5.	BLUE OFFSET ADJUSTMENT	32	6-6.	IC BLOCK DIAGRAMS	90
			6-7.	SEMICONDUCTORS	94
5. SAFETY RELATED ADJUSTMENTS					
6. DIAGRAMS					
7. EXPLODED VIEWS					
7-1.	COVER	95			
7-2.	CHASSIS	96			
7-3.	PICTURE TUBE	97			
8. ELECTRICAL PARTS LIST 98					

SECTION 1

SELF DIAGNOSIS FUNCTION

1. Summary of Self-Diagnosis Function

- This device includes a self-diagnosis function.
- In case of abnormalities, the TIMER/STAND BY indicator automatically blinks. It is possible to predict the abnormality location by the number of blinks. The Instruction Manual describes blinking of the TIMER/STAND BY indicator.
- If the symptom is not reproduced sometimes in case of a malfunction, there is recording of whether a malfunction was generated or not. Operate the remote command to confirm the matter on the screen and to predict the location of the abnormality.

2. Diagnosis Items and Prediction of Malfunction Location

- When a malfunction occurs the TIMER/STAND BY indicator only blinks for one of the following diagnosis items. In case of two or more malfunctions, the item which first occurred blinks. If the malfunctions occurred simultaneously, the item with the lower blink count blinks first.
- The screen display displays the results regarding all the diagnosis items listed below. The display “0” means that no malfunctions occurred.

Diagnosis Item	No. of times TIMER/STANDBY indicator blinks	Probable Cause Location	Detected symptoms
Power does not turn on	0	• Power cord is not plugged in. • Fuse is burned out (F6001) (G board)	• Power does not come on. • No power is supplied to the unit. • AC power supply is faulty.
+B overcurrent (OCP) (See Note 1)	2 times	• H. OUT (Q8024) is shorted. (D board) • +B PWM (Q8035, 8038) is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
+B overvoltage (OVP)	3 times	• IC5001 is faulty (G board) • IC5002 is faulty (G board)	• Has entered standby mode.
Vertical deflection stopped	4 times	• +15V is not supplied. (D board) • IC8003 is faulty. (A board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
White balance failure (Not balanced)	5 times	• Video out (IC7101, 7201, 7301) is faulty. (CR, CG, CB board) • CRT drive (IC309) is faulty. (A board) • G2 is improperly adjusted. (See Note 2)	• No raster is generated. • CRT cathode current detection reference pulse output is small.
LOW B OCP/OVP (Overcurrent/over voltage) (See Note 3)	6 times	• +5 line is overloaded. (A, B boards) • +5 line is shorted. (A, B boards)	• No picture • No picture
Horizontal deflection stopped	7 times	• Q8035, 8038 is shorted. (D board)	
High voltage error	8 times	• T8005 is faulty. (D board)	
Audio error	9 times	• +19V line is shorted. (A, B boards) • IC708 is faulty. (A board) • PS701 or PS702 is opened. (A board)	• No sound

Note1: If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on screen.

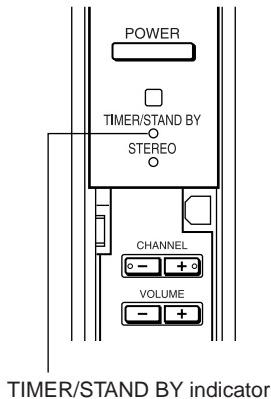
Note 2: Refer to Screen (G2) Adjustment in Section 3-1, 2 of this manual.

Note 3: If TIMER/STANDBY indicator blinks six (6) times, unplug the unit and wait 10 minutes before performing the adjustment.

3. Blinking count display of TIMER/STAND BY indicator

* One blink is not used for self-diagnosis.

< FRONT PANEL >

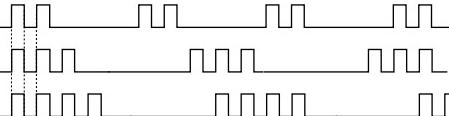


•EXAMPLE

<Diagnosis Items> <Number of Blinks>

- +B overcurrent 2 times
- +B overvoltage 3 times
- Vertical deflection stop 4 times

Lamp ON : 0.3 seconds ← Lamp OFF : 3.0 seconds ←



Release of TIMER/STAND BY indicator blinking.

- The TIMER/STAND BY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

4. Self-diagnosis screen displays

- In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

<Screen Display Method>

- Quickly press the remote command button in the following order from the standby state.

[DISPLAY] → [Channel 5] → [VOL -] → [POWER]
 ↑

Be aware that this differs from the method of entering the service mode (volume **[+]**).

Self-diagnosis screen display

SELF DIAGNOSIS	
2 : +B OCP	N/A
3 : +B OVP	N/A
4 : V STOP	0
5 : AKB	1
10 : WDT	24

Numeral "0" means that no fault was detected.
 Numeral "1" means a fault was detected one time or more

5. Self-Diagnosis Screen Display

- The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to "0".
- If the results display is not returned to "0" it will not be possible to judge a new malfunction after completing repairs.

<Method of Clearing Results Display>

- Power off (Set to the standby mode)
- [DISPLAY] → [Channel 5] → [VOL +] → [POWER]** (Service Mode)
- Channel **[8] → [ENTER]** (Test reset = Factory preset condition)

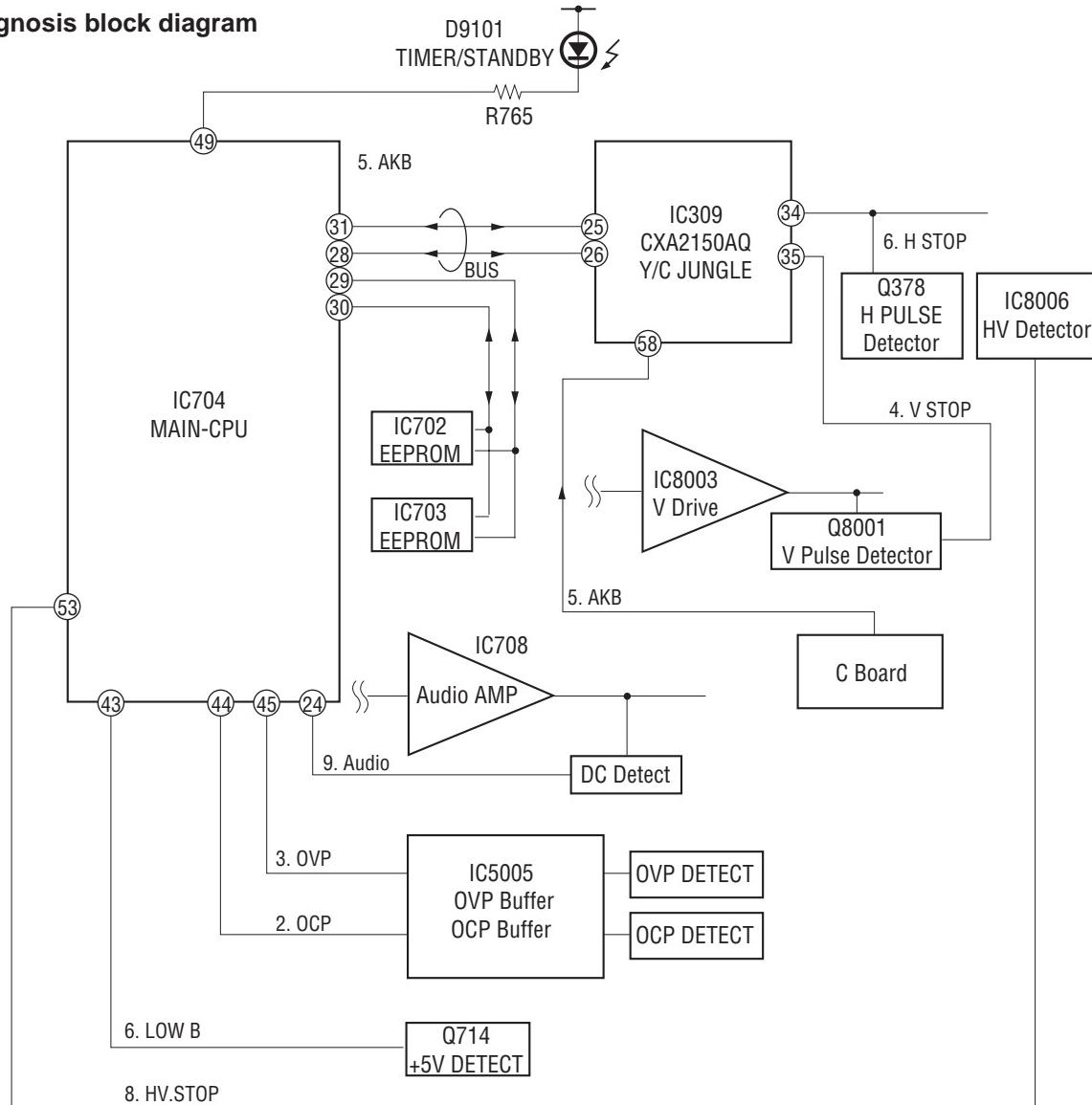
<Method of Ending Self Diagnosis Screen>

- When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

6. Self-diagnosis function operation

- OCP Low B and +B line detect DET SHORT, and shut-down POWER ON RELAY.
Reset by turning power on/off.
In case of +B is loaded approx. 1.5A or more, microcomputer detects it via IC5005
- OVP In case of +B becomes approx. 150V or more, POWER ON RELAY shuts down and microcomputer detects it via IC5005.
Reset by turning power on/off just the same as OCP.
- Low B Occurs when set +5V is out
- V Stop In case of V Drive disappeared, Q8001 detects it and shut-down POWER ON RELAY. Microcomputer detects it and makes LED blinking.
- AKB IK detection. Makes LED blinking in case of microcomputer doesn't detect IK returns of IC309 (CXA2150AQ) 20 seconds or more.
- H Stop In case of H DRIVE is disappeared, Q378 detects it and shut-down POWER ON RELAY shuts down.
Microcomputer receives H Stop data from Q378 and makes LED blinking.
- HV Stop In case of HV becomes 33KV or more. IC8006 detects it and shut-down
POWER ON RELAY. Microcomputer makes LED blinking.
- Audio In case of DC component overlaps the output of Audio Amp., POWER ON RELAY shuts down.
Microcomputer detects it and makes LED blinking.

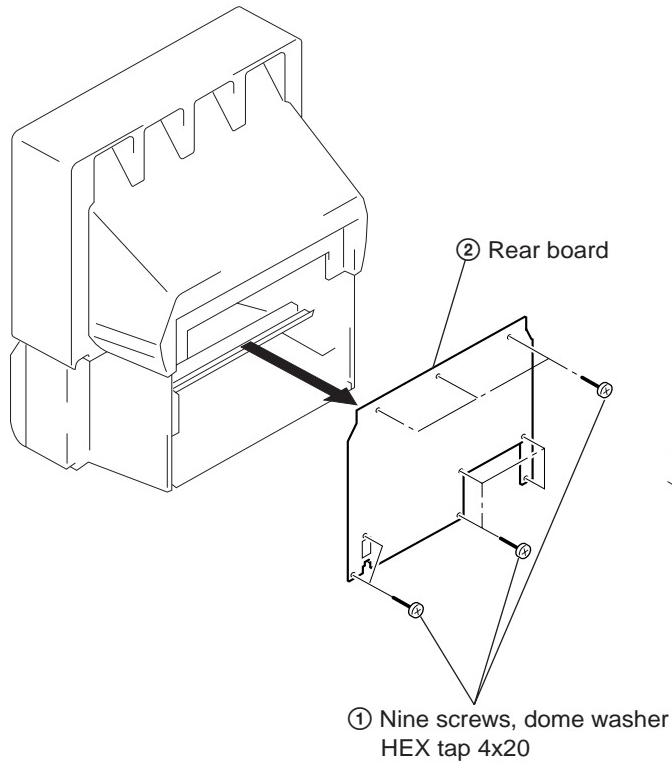
Self-diagnosis block diagram



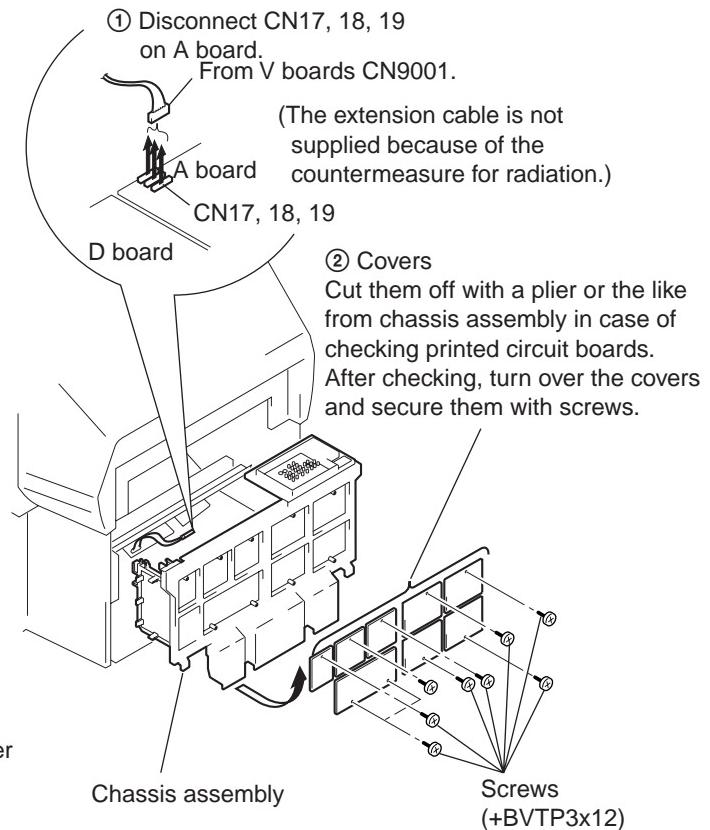
SECTION 2

DISASSEMBLY

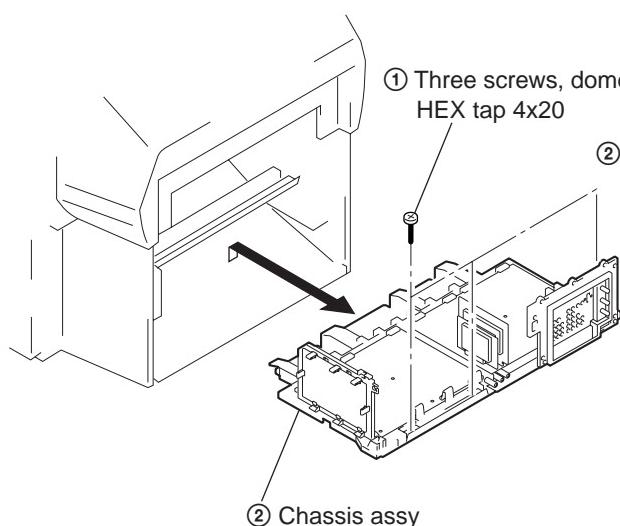
2-1. REAR BOARD REMOVAL



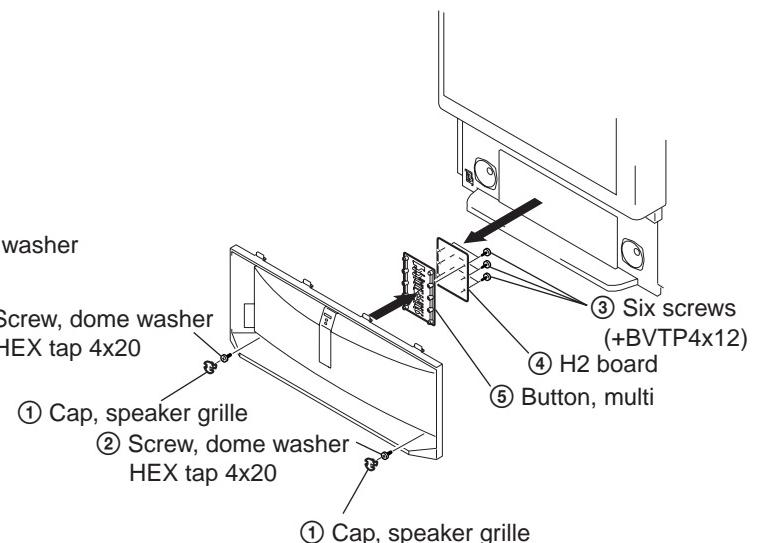
2-3. SERVICE POSITION



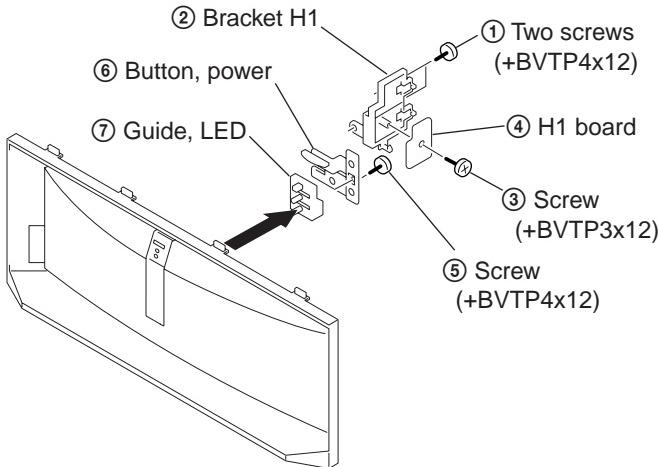
2-2. CHASSIS ASSY REMOVAL



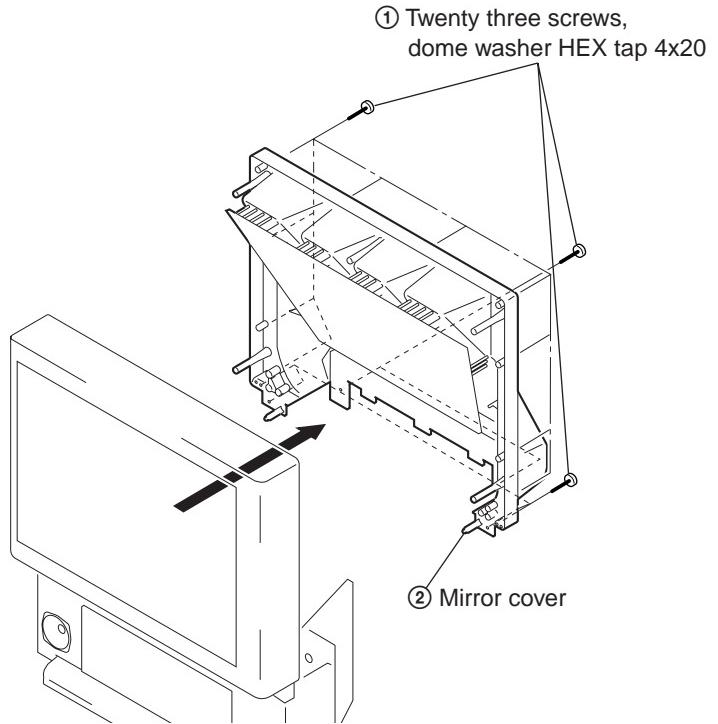
2-4. H2 BOARD REMOVAL



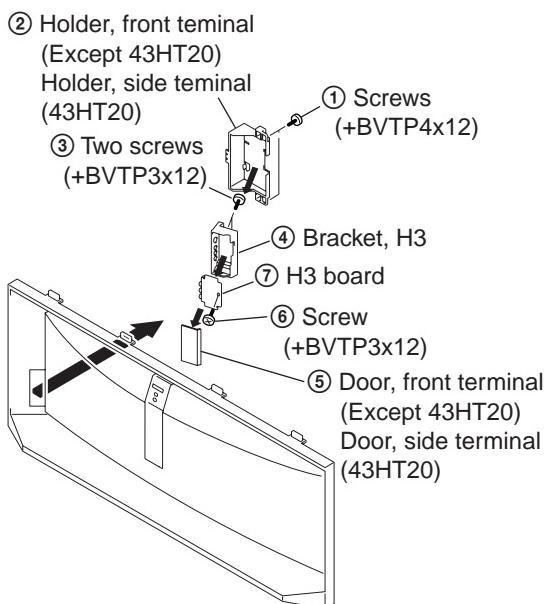
2-5. H1 BOARD REMOVAL



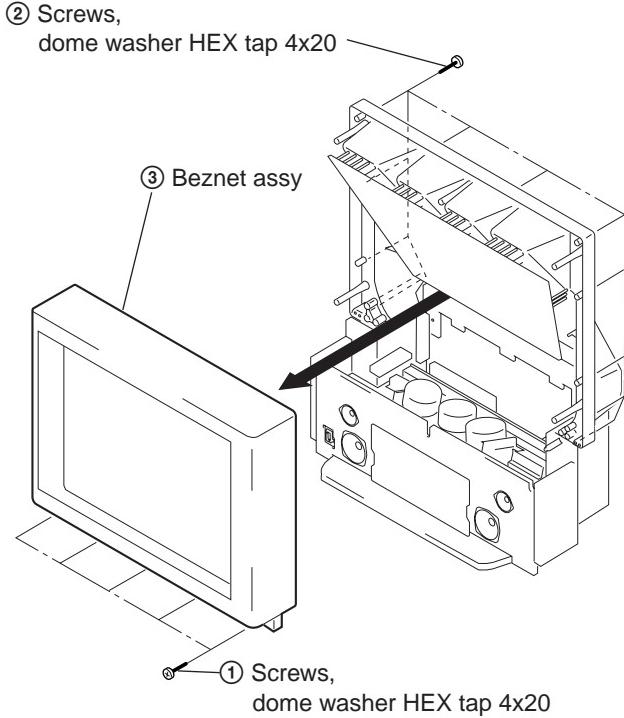
2-7. MIRROR COVER REMOVAL



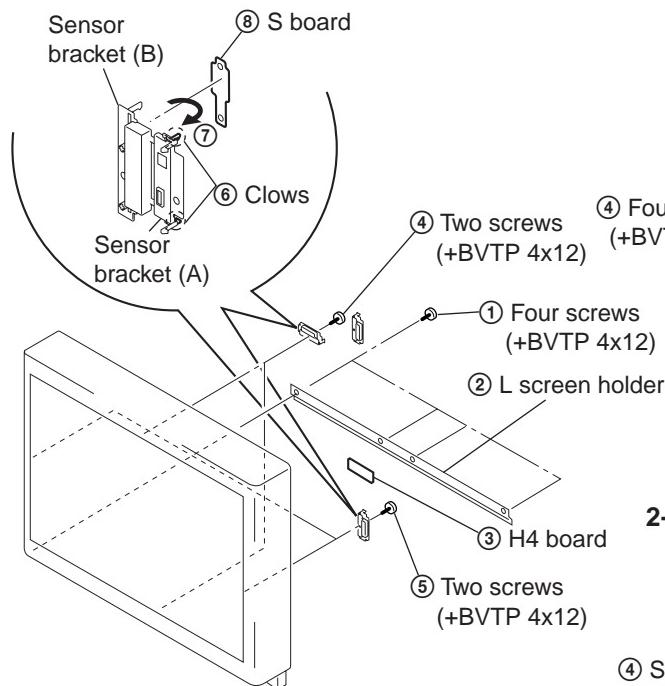
2-6. H3 BOARD REMOVAL



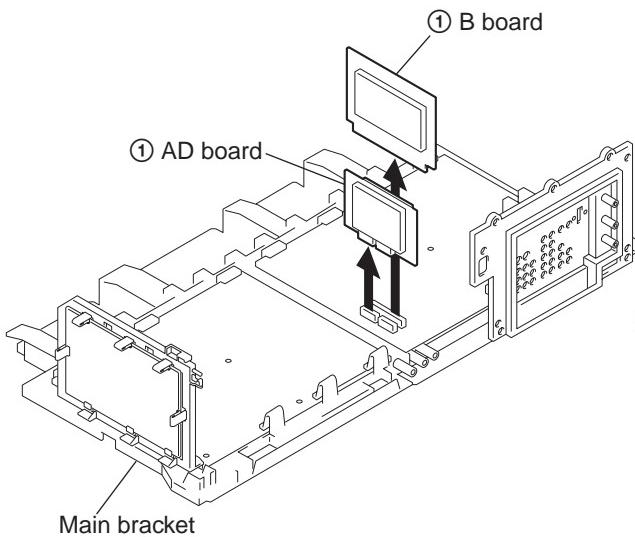
2-8. BEZNET ASSY REMOVAL



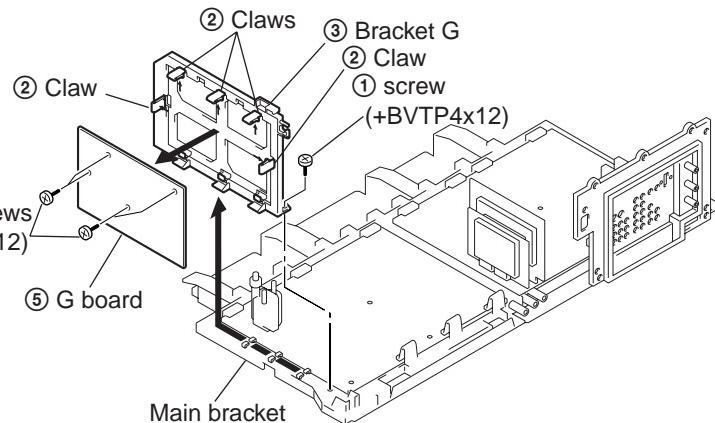
2-9. H4 BOARD AND S BOARD REMOVAL



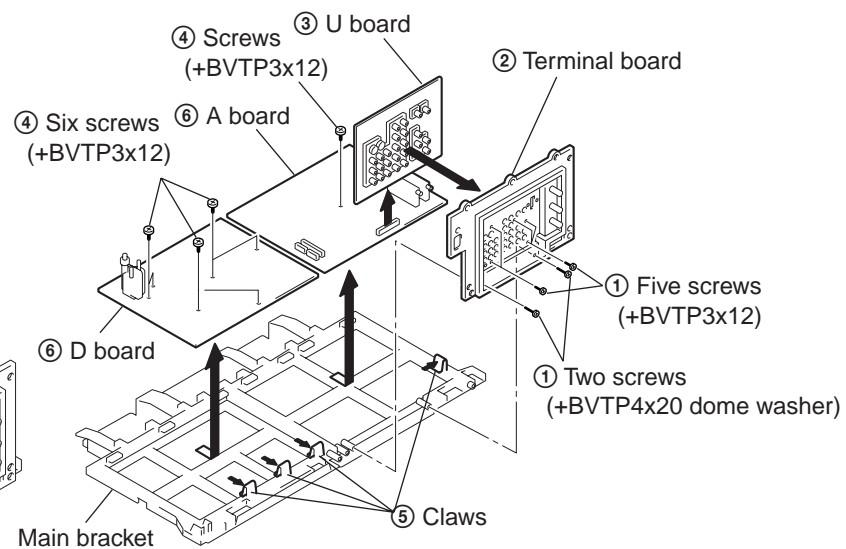
2-10. AD BOARD AND B BOARD REMOVAL



2-11. G BOARD REMOVAL

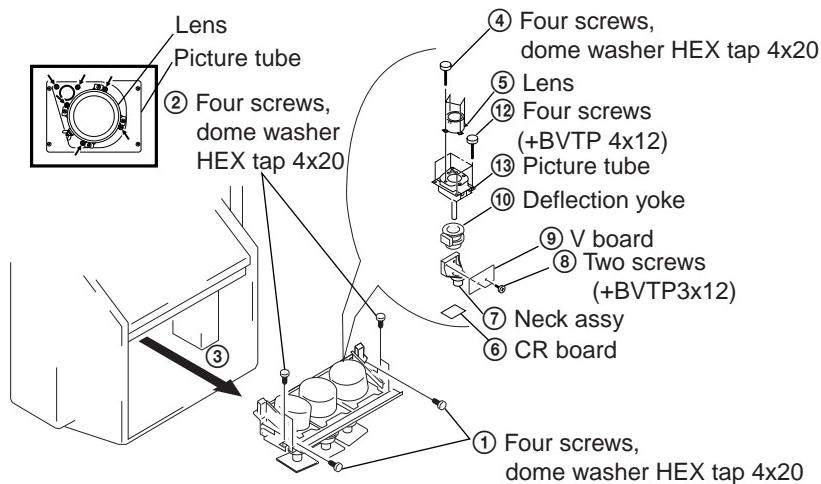


2-12. A BOARD, D BOARD AND U BOARD REMOVAL



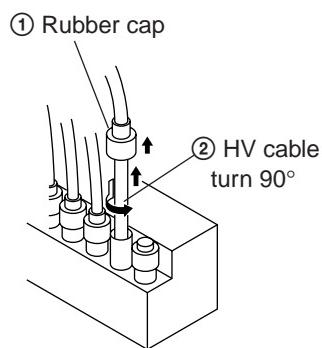
2-13. PICTURE TUBE REMOVAL

CAUTION: Removing the arrow-marked screws is strictly prohibited.
If removed, it may cause liquid spill.

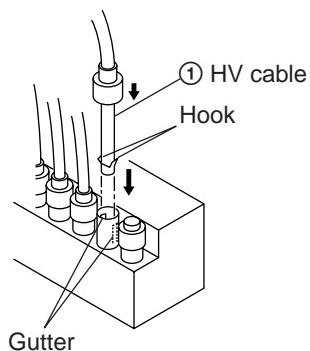


2-14. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Removal



(2) Installation

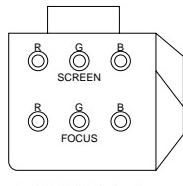


SECTION 3

SET-UP ADJUSTMENTS

3-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the FOCUS block all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.



FOCUS block

Fig. 3-1

3-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

Fine Mode is recommended to set screen controls to their optimal condition. It is necessary to build the simple jig, illustrated below, using 3-watt resistors. Please note, that if the proper voltage is not obtained with their listed values, resistors, then please increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO1 mode without signals.
2. Connect G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board and CB board.
5. Adjust R, G and B screen voltage to $170 \pm 0.5V$ with screen VR on the Focus block.

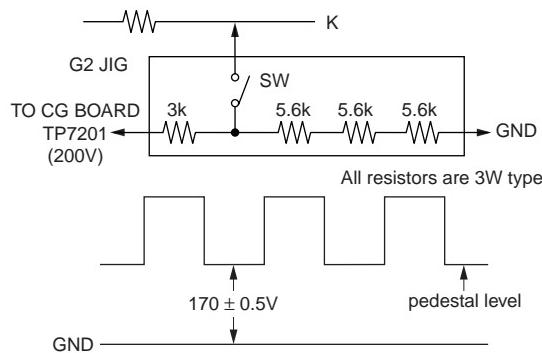


Fig. 3-2

3-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Loosen the deflection yoke set screw and align the tilt of the Deflection Yoke so that the bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. The tilt of the deflection yoke for red is aligned in the mode Cover the both green and blue picture lenses with the lens caps and the tilt of the deflection yoke for blue is aligned with in

the mode Cover the both green and red picture lenses with the lens caps is aligned the same as was done for green.

Note: Instead of items 2 and 5, you can cut off the unnecessary color beams by controlling the service mode CXA2150P-2 0 RGBS.

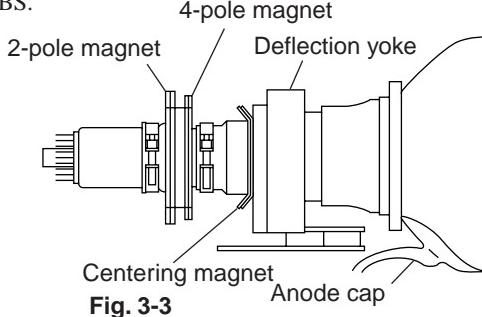


Fig. 3-3

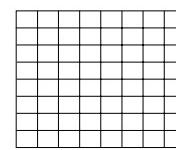
3-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander in the service mode.

For details of the usage of the service mode and the remote commander, please refer the item 3-9. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the both green and blue picture lenses with the lens caps to show only the red color.
6. Adjust red CRT lens just the same as green.
7. Cover the both green and red picture lenses with the lens caps to show only the blue color.
8. Adjust blue CRT lens just the same as green.
9. After adjusting the items 3-5. Focus VR Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

*: Every time you press 6, the test signal changes to "crosshatch+video signal" - "crossbatch+borderline(black)" - "crosshach(black)" - "dots(black)" - off.



Test signal

Fig. 3-4

Note: Instead of items 2, 5 and 7, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-5. FOCUS VR ADJUSTMENT

1. Set generator to crosshatch.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the both green and blue picture lenses with the lens caps to show only the red color.
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the both green and red picture lenses with the lens caps to show only the blue color.
7. Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
8. After adjusting the items 3-4. Focus Lens Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

Note: Instead of items 2, 4 and 6, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

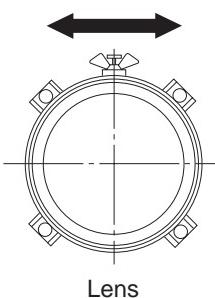


Fig. 3-5

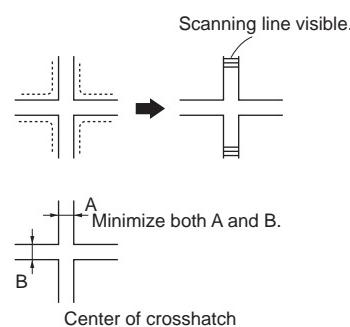


Fig. 3-6

3-6. 2-POLE MAGNET ADJUSTMENT

1. Set the picture mode to "Pro" and picture to MAX.
2. Receive the Dot signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Turn the green focus VR on the focus block to the left and set to overfocus to enlarge the spot.
5. Adjust 2-pole magnet so that the bright spot should be centered.
6. Align the green focus VR and set for just (precise) focus.
7. Perform the same alignment for red and blue.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

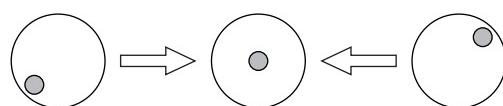


Fig. 3-7

3-7. CENTERING MAGNET ADJUSTMENT

1. Set the picture mode to "Pro".
2. Receive the monoscope signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Adjust the green centering magnet to put the center of the monoscope signal to the center of the screen.
5. Adjust the red centering magnet in the same way.
6. Adjust the blue centering magnet in the same way.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-8. 4-POLE MAGNET ADJUSTMENT

1. Set the picture mode to "Pro" and picture to MAX.
2. Receive the Dot signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Turn the green focus VR on the focus block to the right and set the spot will become smaller.
5. Adjust the 4-Pole Magnet so that the spot becomes round for green and red.
6. Adjust blue spot to an oval shape X:Y=1:1.4 ~ 1.5.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

Use the center dot

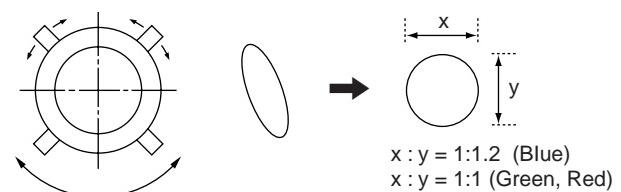


Fig. 3-8

3-9. DEFOCUS ADJUSTMENT (BLUE)

Note: Please adjust the blue dot to be slightly larger than red and green dots. This adjustment provides a more pleasing picture to the customer.

1. Select the picture mode to "Pro".
2. Receive the Dot signal.
3. Cover the both red and green picture lenses with the lens caps to show only the blue color.
4. Turn the blue focus VR on the focus block to right to make the round dot elipical.
5. Check flare with high luminace signal, make sure flare is minimal while dot shape is elipical.
6. Set generdotor to all white signal and check uniformity.

Note: Instead of item 3 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-10.ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

By using Remote Commander (RM-Y909), all circuit adjustments can be made.

NOTE : Test Equipment Required.

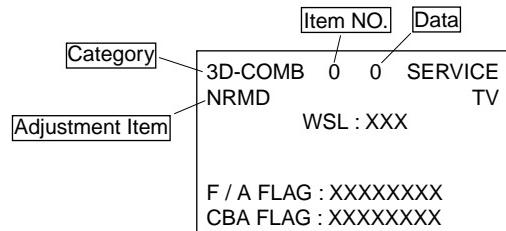
1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

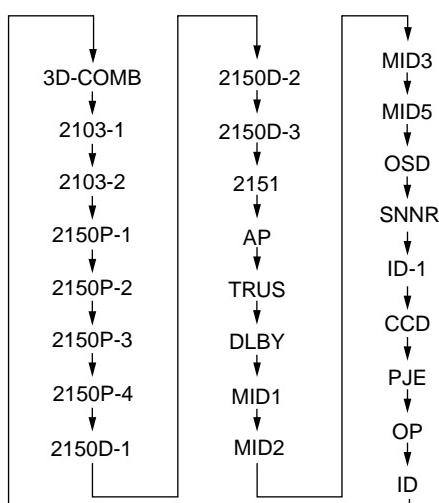
1. Standby mode. (Power off)
2. **[DISPLAY] → [5] → [VOL (+)] → [TV POWER]**
on the Remote Commander.
(Press each button within a second.)

SERVICE MODE ADJUSTMENT



3. The SCREEN displays the item being adjusted.
4. Press **[1]** or **[4]** on the Remote Commander to select the adjustment item.
5. Press **[3]** or **[6]** on the Remote Commander to change the data.
6. Press **[2]** or **[5]** on the Remote Commander to select the category.

Every time you press 2(Category up), Service mode changes in the order as shown below.



7. If you want to recover the latest values press **[0]** then **[ENTER]** to read the memory.

8. Press **[MUTING]** then **[ENTER]** to write into memory.

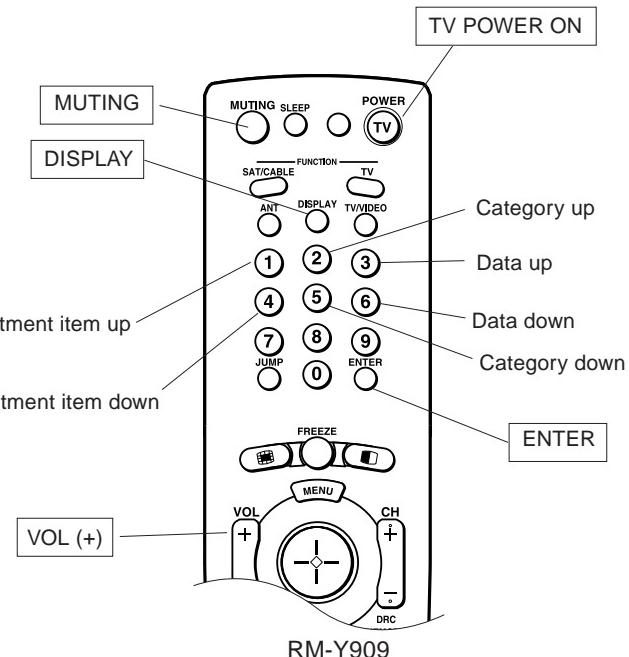
9. Turn power off.

Note: Press **[8]** then **[ENTER]** on the Remote Commander to initialize or turn set off and on to exit.

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn power off with the remote commander.
2. Turn power on and set to Service Mode.
3. Call the adjusted items again and confirm they were adjusted.

3. ADJUSTING BUTTONS AND INDICATOR



Note : When the PJE mode is activated, which displays an internally generated signal, several buttons on the remote commander will have different functions than listed above. Therefore, when in the PJE mode, refer to page 26 for button functions.

4. SERVICE MODE LIST

Note: • **shaded items** are fixed. There is no need to change data. Others are different a little in the sets individually. Basically, there is no need to change data, too.

3D-COMB uPD64082

Reg.No & Name	FUNCTION	Note: * shows common data.			
		Standard	Non-standard	Standard	Non-standard
0 NRMID	Operation mode setting	0	1	3	3
1 YAPS	Y-output correction	3	*	*	*
2 CLKS	System clock setting	1	*	*	*
3 NSDS	Selection for standard/non-standard signal processing	UHF/VHF & Cvideo	UHF/VHF & Cvideo	Video	Video
4 MASS	Selection for inter-frame/inter-line processing	Standard	Non-standard	Standard	Non-standard
5 KILS	Killer processing selection	0	*	0	0
6 CDL	C-signal phase with respect to the Y-signal	1	*	*	*
7 DYCCO	DY detection coring level (Y motion detection coring)	3	3	NRMID=1	NRMID=2
8 DYGA	DY detection gain (Y motion detection gain)	2	2	2	2
9 DCCO	DC detection coring level (C motion detection coring)	10	10	10	10
10 DGGA	DC detection gain (C motion detection gain)	5	5	5	5
11 YNRL	Frame recursive YNNR (nonlinear filter limit level)	5	5	5	5
12 CNRL	Frame recursive CNR (nonlinear filter limit level)	1	*	*	*
13 VTRH	Hysteresis for Hsync non-standard signal detection	1	1	1	1
14 VTRR	Sensitivity for Hsync non-standard signal detection	1	1	1	1
15 LDRS	Sensitivity for frame non-standard signal detection	2	2	2	2
16 VAFG	V-aperture compensation gain	VM=off	VM=Mid	VM=High	VM=High
17 VAPI	V-aperture compensation convergence point	0	0	0	0
18 SPFF	Y-peaking filter (BPF) center frequency	0	0	0	0
19 YPPFG	Y-peaking filter (BPF) gain	3	0	0	0
20 YHCO	Y output high frequency component coring	8	SNR=0	SNR=1	SNR=2
21 YHCG	Y output high frequency component coring gain	0	1	1	1
22 HSSL	Hsync slice level	1	1	1	1
23 VSSI	Vsync slice level	12	*	*	*
24 ADCL	ADC clock delay	8	*	*	*
25 D2GAA	Moving detection gain	3	4	4	4
26 KILR	Killer detection reference	4	4	4	4
27 OP	Option: Selection of comb filter & recursive n reduction types.	1	*	1	*
28 SNRI	Noise reduction on/off	0	0	1	1
29 NR2	SNR control on/off	0	*	*	*
30 WSL	Noise level detection level data	0.255	Read Data	*	*
31 HPLL	H-PLL filter	1	*	*	*
32 BPLL	Burst PLL filter	1	*	*	*
33 FSCF	Burst extraction gain	0	*	*	*
34 PLLF	PLL loop gain	1	*	*	*
35 CCIN	Selection of line-comb filter/C separation filter characteristic	0	0	0	0
36 HDP	Fine adjustment of the system H-phase	5	*	*	*
37 BGPS	Internal	4	*	*	*
38 BGFW		10	*	*	*
39 TEST	Test bit (0=Normal mode, 1=Test mode) * forbidden setting	0	*	*	*
40 WSC	Amount of noise detection coring	1	*	*	*
41 LINR	DRC-M line-decoding setting for non-standard signals UHF/VHF&Video1~4	0	0	2	2
42 YPFEGO	(YPFG off)at GR on * Not used	3	*	*	*
#16 VAFG		SNR=0	SNR=1	SNR=2	SNR=3
		0	0	0	0

3D-COMB uPD64082

Reg.No & Name	FUNCTION	Note: YHCO & YHCG are defined directly by SNR data.			
		UHF/VHF	CVideo1	CVideo2	CVideo3
27 OP	Option: Selection of comb filter & recursive n reduction types.	1	*	1	*
28 SNRI	Noise reduction on/off	0	0	1	1
29 NR2	SNR control on/off	0	*	*	*
30 WSL	Noise level detection level data	0.255	Read Data	*	*
31 HPLL	H-PLL filter	1	*	*	*
32 BPLL	Burst PLL filter	1	*	*	*
33 FSCF	Burst extraction gain	0	*	*	*
34 PLLF	PLL loop gain	1	*	*	*
35 CCIN	Selection of line-comb filter/C separation filter characteristic	0	0	0	0
36 HDP	Fine adjustment of the system H-phase	5	*	*	*
37 BGPS	Internal	4	*	*	*
38 BGFW		10	*	*	*
39 TEST	Test bit (0=Normal mode, 1=Test mode) * forbidden setting	0	*	*	*
40 WSC	Amount of noise detection coring	1	*	*	*
41 LINR	DRC-M line-decoding setting for non-standard signals UHF/VHF&Video1~4	0	0	2	2
42 YPFEGO	(YPFG off)at GR on * Not used	3	*	*	*
#16 VAFG		SNR=0	SNR=1	SNR=2	SNR=3
		0	0	0	0

NTSC-CYCT (Chroma Decoder) CXA2103-1 (Main)

Reg.No & Name	FUNCTION	UV & Video	YCbCr-480i
		P&P Left (M)-DRC	P&P Left (M)-DRC
0 YLEV	Y-Out gain	34	40
1 CLEV	Ch&C+Out gain	27	46
2 SCON	Sub contrast	UHF/VHF	Video
3 SCOL	Sub color	ADJ(7)	ADJ(7)
4 SHUE	Sub hue	ADJ(7)	ADJ(7)
5 YDLV	Y/C delay time	0	0
6 SHAP	Sharpness	UVH/VHF	Video
7 SHFO	Sharpness f0 selection	5	4
8 PREO	Sharpness pre-over-shoot ratio	3	3
9 BPFO	Chroma band filter f0 setting	3	0
10 BPFO	Chroma band filter Q setting	0	0
11 BPFW	Chroma band filter on/off	1	0
12 TRAP	Y block chroma trap filter on/off	0	0
13 LPF	Y Ch Ce Output LPF on/off	1	1
14 AFCG	AFC Loop gain (PLL between Hsync & HVCO)	UV & Video	YCbCr-480i
15 CDMD	V countdown system mode selector	1	0
16 SSMD	H&V sync slide level setting	3	3
17 HMSK	Masking of macrovision signal on/off	0	0
18 HALI	H automatic adjustment on/off	1	1
19 PPHA	H/TIM phase adjustment video	7	7
20 CBDF		UV & Video	YCbCr-480i
21 CROF		P&P Left (M)-DRC	P&P Left (M)-DRC
		34	34
		32	32

NTSC-CYCT (Chroma Decoder) CXA2103-2 (Sub)

Reg.No & Name	FUNCTION	UV & Video	P&P & Favorite
		P&P Right (S)-DRC	P&P Right (S)-DRC
0 YLEV	Y-Out gain	34	38
1 CLEV	Ch&C+Out gain	27	31
2 SCON	Sub contrast	UHF/VHF	Video
3 SCOL	Sub color	ADJ(7)	ADJ(7)
4 SHUE	Sub hue	ADJ(7)	ADJ(7)
5 YDLV	Y/C delay time	0	0
6 SHAP	Sharpness	UVH/VHF	Video
7 SHFO	Sharpness f0 selection	4	4
8 PREO	Sharpness pre-over-shoot ratio	3	3
9 BPFO	Chroma band filter f0 setting	0	0
10 BPFO	Chroma band filter Q setting	0	0
11 BPFW	Chroma band filter on/off	0	0
12 TRAP	Y block chroma trap filter on/off	0	0
13 LPF	Y Ch Ce Output LPF on/off	0	0
14 AFCG	AFC Loop gain (PLL between Hsync & HVCO)	UVH/VHF	Video
15 CDMD	V countdown system mode selector	1	0
16 SSMD	H&V sync slide level setting	3	3
17 HMSK	Masking of macrovision signal on/off	0	0
18 HALI	H automatic adjustment on/off	1	1
19 PPHA	H/TIM phase adjustment video	7	7
20 CBDF		UV & Video	YCbCr-480i
21 CROF		P&P Right (S)-DRC	P&P Right (S)-DRC
		32	32
		31	31

Note: Reg.No 14 to 19 are the same data as CXA2103-1. (the same NVM address)

Note: Reg.No 22 and 23 are the same data as CXA2103-1. (the same NVM address)

CRT Driver CXA2150P-1 (Picture Controls: P1)

Reg.No & Name	FUNCTION
0 SHOT	Offset for SBR/T
1 YOF	Y OFFSET: DC-offset for Y signal
2 CBOF	CB OFFSET: DC-offset for C signal
3 CROF	CR OFFSET: DC-offset for Cr signal
4 SIRT	SUB BRT: Sub Bright
5 RDRV	R DRIVE: R output drive
6 GDRV	G DRIVE: Gain/pin drive
7 BDRV	B DRIVE: B output drive
8 RCUT	R CUTOFF: R output cutoff
9 GCUT	G CUTOFF: Gain/pin cutoff
10 BCUT	B CUTOFF: B output cutoff
11 WBSW	WB SW
12 SBOF	Offset for SBR/T
13 RDOF	Offset for GDRV
14 GDOF	Offset for GDRV
15 BDOF	Offset for BDRV
16 RCDF	Offset for RCUT
17 GCDF	Offset for GCUT
18 BCDF	Offset for BCUT

CRT Driver CXA2150P-2 (Picture Controls:P2)

Reg.No & Name	FUNCTION
0 ALBK	PIC ON
1 RGBS	R,NG,G,ON,B,ON,R,RGB,outputs on/off
2 BLKB	BLK_BTW: RGB output bottom limit level (Black Level)
3 LIML	LIMIT_LLEV: Threshold level for excessively high inputs
4 PABL	PABL_DC:Level in RGB output detection for PEAKABL
5 SABL	SABL_DC:level in RGB output detection for PEAKABL
6 AGING	AGING_WAGING_B: AGING WAGING B modes on/off
7 AKBO	AKBOFF: Automatic/Manual = Cut off setting
8 SYPH	SYNC PHASE: Sync delay with respect to Video (100% H-period)
9 CLPH	CLIP PHASE: Internal clamp pulse phase (100% t-period)
10 CLGA	CLIP GATE: Switch for the gated internal clamp pulse with Sync
11 JAXS	JAXS: color axis switch
12 BLKO	BLKO: Blanking switch

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part1)

Reg.No & Name	FUNCTION
0 SVSM	SYSTEM: Signal bandwidth setting
1 UVML	VM_LBN: VM_OUT level
2 VMMO	System Macro pin#40
3 VMCR	VM_CCR: VM_OUT coding level
4 YMIM	VM_LMT: VM_OUT limit level
5 VMFO	VM_FOF: VM_10
6 VMFL	VM_DL: VM_OUT phase (defined by phase difference from R_OUT)
7 SHOF	Offset for ISHP_SHOF x 4
8 SHFO	SHF_FU: Sharpness circuit (FU)
9 PROV	PRE/OVER: Y signal pre-over-shoot ratio
10 FLLV	SHIP_FU: Sharpness for higher f0 (4.256MHz @NORMAL mode)
11 CDSF	SHIP_CD: Sharpness in part of high color saturation
12 LTFLV	LTV_L: Luminance transient improvement (LTIV)
13 LTIMD	LTI MODE: LTI mode setting
14 CTLV	CTI_LBN: Chrominance transient improvement (CTI)
15 CTMD	CTI MODE: CTI mode setting
16 UBOF	Offset for UBR/T (Picture clarity adjustment)
17 UCOF	Offset for UCOL_UCOF x 2 (Picture clarity adjustment)
18 UHOF	Offset for UHUE_UHOF (Picture clarity adjustment)
19 MIDE	MID enhancement setting

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part2)

Reg No & Name	FUNCTION	Standard				Movie				Pro				
		UHF	CV	SV	YCbCr	YCbCr	YCbCr	YCbCr	SV		UHF	CV	SV	YCbCr
#0 SYSM		1	1	1	1	1	1	1	1		1	1	1	1
#1 UVML		2	2	2	2	2	2	2	1		1	2	2	2
#2 VMMO		1	1	1	1	1	1	1	1		1	1	1	2
#3 VMCR		1	0	1	1	1	3	3	1		0	0	0	0
#4 VMLM		3	3	3	3	3	3	3	3		0	0	0	0
#5 VMFO		2	2	2	2	2	2	2	2		1	1	1	1
#6 VMDL		0	2	2	1	1	1	1	2		2	2	2	2
#7 SHOF		1	0	0	0	2	3	1	1		0	0	0	0
#8 SHFO		1	1	1	1	1	1	1	1		1	1	1	1
#9 PROV		0	3	0	0	0	0	3	3		2	2	3	2
#10 FILV		0	0	0	0	1	3	0	0		1	2	3	3
#11 CDSP		3	3	3	3	3	3	3	0		0	0	0	0
#12 LTIV		2	2	2	2	2	2	2	0		0	0	0	0
#13 LTMD		1	1	1	1	0	1	1	1		1	1	1	1
#14 CLIV		0	0	0	0	0	0	0	0		0	0	0	0
#15 CTMD		0	0	0	0	0	0	0	0		0	0	0	0
#16 UBOF		7	7	7	7	9	7	7	7		7	7	7	7
#17 UCOF		1	1	1	1	0	0	0	0		0	0	0	0
#18 UHOF		0	0	0	0	0	0	0	0		0	0	0	0
#19 MIDE		2	14	14	6	10	-	-	1		13	5	9	-
											0	12	4	8
											-	-	-	-

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part3)

Reg No & Name	FUNCTION	SNNR=0		SNNR=1		SNNR=2		SNNR=3	
		0	0	0	+	+2	+2	+3	
#1 UPIC	PICTURE:Picture								
1 UBRT	BRIGHT: Brightness	26	31	31	31	31	31	31	
2 UCOL	COLOR:	-1	-2	-3					
3 UHUE	HUE:Hue	0	0	0	0	0	0	0	
4 USHP	SHARPNESS: Sharpness	32	40	31	31	31	31	31	
5 UTMP	Color Temperature (0:Warm 1:Neutral 2:Cool)	2	1	0	1	0	1	0	
6 UDCL	DCOL: D	2	2	0	0	0	0	0	
7 AXIS	COL_AXIS: color matrix setting								
8 UGAM	GAMMA: GAMMA L: RGB output GAMMA correction setting	0	0	0	0	0	0	0	
9 AGAM	GAMMA: GAMMA L (AV Pro user control) - Void Data	-							
10 GSBO	Offset for SBR1	UGAM:0	UGAM:1	UGAM:2	UGAM:3	UGAM:4	UGAM:5	UGAM:6	UGAM:7
11 GACO	Offset for ICOL	0	0	0	0	0	0	0	0
12 GHOU	Offset for UHUE	0	0	0	0	0	0	0	0
13 UBLK	Uenif#5-19:pack F1 data controls	6	6	6	6	6	6	6	4
14 ABLK	(Av Pro user control)- Void Data	-							
15 DCIR	DC TRAN: Y signal DC transmission	1	1	1	2	2	3	3	3
16 DPIC	DPIC: LEV_Y signal AUTO PEDESTAL level	0	1	2	1	1	2	1	2
17 DSBO	Offset for ICOL	7	7	7	7	7	7	7	7
18 ABIM	ABL MODE: ABL mode	0	0	0	0	0	0	0	1
19 ABLT	ABL TH: ABL current detection Vth contro	0	0	0	0	0	0	0	1
20 EPDF	Offset for UPIC-EPOF X (UPIC/C63) (for power save) - Void Data	15	<< Only available at Vcomp 1 & 2.						
21 SPOF	Offset for UPIC-SPOF X (UPIC/C64) - Data Not used	UHF/VHF V1-4	YCbCr480i	YCbCr480P	YCbCr480i	YCbCr480P	YCbCr480i	YCbCr480P	F&P
22 SCON	SUB CONTRAST: SUB PICTURE	8	5	5	4	4	4	4	
23 CLOF	Offset for UHUE	9	9	9	9	9	9	9	9
24 HUOF	Offset for UHUE	5	5	5	5	5	5	5	
25 IDSW	Not used								
26 DATA	Display of vertical compression modes, Not used	0							

CRT Driver CXA2150P-4 (Picture Controls:P4)

Reg No & Name	FUNCTION	Vivid		Standard		Movie		Pro
		UHF/VHF V1-4	YCbCr480i	YCbCr480P	YCbCr480i	YCbCr480P	YCbCr480i	
0 UPIC	PICTURE:Picture	63	44	31	31	31	31	
1 UBRT	BRIGHT: Brightness	26	31	31	31	31	31	
2 UCOL	COLOR:	-1	-2	-3				
3 UHUE	HUE:Hue	0	0	0	0	0	0	
4 USHP	SHARPNESS: Sharpness	32	40	31	31	31	31	
5 UTMP	Color Temperature (0:Warm 1:Neutral 2:Cool)	2	1	0	1	0	1	
6 UDCL	DCOL: D	2	2	0	0	0	0	
7 AXIS	COL_AXIS: color matrix setting							
8 UGAM	GAMMA: GAMMA L: RGB output GAMMA correction setting	0	0	0	0	0	0	
9 AGAM	GAMMA: GAMMA L (AV Pro user control) - Void Data	-						
10 GSBO	Offset for SBR1	UGAM:0	UGAM:1	UGAM:2	UGAM:3	UGAM:4	UGAM:5	UGAM:7
11 GACO	Offset for ICOL	0	0	0	0	0	0	0
12 GHOU	Offset for UHUE	0	0	0	0	0	0	0
13 UBLK	Uenif#5-19:pack F1 data controls	6	6	6	6	6	6	4
14 ABLK	(Av Pro user control)- Void Data	-						
15 DCIR	DC TRAN: Y signal DC transmission	1	1	1	2	2	3	3
16 DPIC	DPIC: LEV_Y signal AUTO PEDESTAL level	0	1	2	1	1	2	2
17 DSBO	Offset for ICOL	7	7	7	7	7	7	7
18 ABIM	ABL MODE: ABL mode	0	0	0	0	0	0	1
19 ABLT	ABL TH: ABL current detection Vth contro	0	0	0	0	0	0	1
20 EPDF	Offset for UPIC-EPOF X (UPIC/C63) (for power save) - Void Data	15	<< Only available at Vcomp 1 & 2.					
21 SPOF	Offset for UPIC-SPOF X (UPIC/C64) - Data Not used	UHF/VHF V1-4	YCbCr480i	YCbCr480P	YCbCr480i	YCbCr480P	YCbCr480i	F&P
22 SCON	SUB CONTRAST: SUB PICTURE	8	5	5	4	4	4	
23 CLOF	Offset for UHUE	9	9	9	9	9	9	
24 HUOF	Offset for UHUE	5	5	5	5	5	5	
25 IDSW	Not used							
26 DATA	Display of vertical compression modes, Not used	0						

CRT Driver CXA2150P-4 (Picture Controls:P4)

Reg.No & Name	FUNCTION
#4 USHP	SNR =0 0
#4 USHP	SNR =-1 1
#4 USHP	SNR =-2 3
#4 USHP	SNR =-3 4

Reg.No & Name	Picture Mode : Standard				Picture Mode : Movie				Picture Mode : Pro			
	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	YCbCr 480P 1080i	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	UHF VHF V1_-4	YCbCr 480P 1080i
#8 UGAM	2	2	1	1	0	0	0	0	0	0	0	0
#13 UBLK	3	3	3	3	1	1	1	1	1	0	0	0

Reg.No & Name	Picture Mode : Standard				Picture Mode : Movie				Picture Mode : Pro			
	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	YCbCr 480P 1080i	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	UHF VHF V1_-4	YCbCr 480P 1080i	P&P 480P VHF V1_-4	UHF VHF V1_-4	YCbCr 480P 1080i
#13 UBLK	3	3	3	3	1	1	1	1	1	0	0	0
#13 UBLK	3	3	3	3	1	1	1	1	1	0	0	0

CRT Driver CXA2150D-1 (Deflection Controls:D1)

Reg.No & Name	FUNCTION
0 VPOS	V POSITION: Vertical position (V DRW signal DC bias)
1 VSZ	V SIZE: Vertical size (V DRW signal gain)
2 VSZO	V SIZE OFFSET
3 VLIN	V LINEARITY: Vertical linearity
4 VSCO	S CORRECTION: Vertical S-correction
5 VCEN	VSAWN1 DCH / SAWN1 DCL: Vertical center adjustment
6 VPIN	VSAWN1 AMP: Vertical PIN adjustment
7 NSCO	VSAWN1 DC: Rotation
8 HTFZ	VSAWN1 AMP: Horizontal trapezoid
9 ZOOM	ZOOM SW: Zoom switch
10 APSW	ASP SW: Aspect switch
11 ASPT	V ASPECT: Aspect ratio
12 SCRLL	V SCRLL: Vertical scroll
13 UVLN	UP VLN: Upper vertical linearity
14 LVLN	LO VLN: lower vertical linearity

CRT Driver CXA2150D-2 (Deflection Controls:D2)

Reg.No & Name	FUNCTION
0 HCNT	HC PARA DC: Horizontal center
1 HPOS	H POSITION: Horizontal position
2 HSIZ	H SIZE: Horizontal size
3 SLIN	MP PARA DC: Horizontal S-correction
4 MPIN	MP PARA AMP: Horizontal middle pin
5 PINO	PIN AMP: Horizontal pin
7 LCP	LIP CPN: Upper corner pin
8 LCP	LO CPN: Lower corner pin
9 UXCG	UP CGC: Upper extra corner pin gain
10 LXCG	LO UCG: Lower extra corner pin gain
11 UXCP	UP UCP: Upper extra corner pin position
12 LXCP	LO UCP: Lower extra corner pin position
13 XCSP	UC POI: Extra corner pin polarity
14 PPHA	PIN PHASE: Pin phase
15 VANG	AFC ANGLE: AFC angle
16 LANG	HC PARA PHASE: Linearity angle
17 VBOW	AFC BOW: AFC bow
18 LBOW	HC PARA AMP: Linearity/below
19 CPY1	Copy function 1: (Set CPY1=1, then press MU[TE+Enter]) * Not used

CRT Driver CXA2150D-3 (Deflection Controls:D3)

Reg No. & Name	FUNCTION	1080i	Full	Normal	Zoom	WideZoom
0 BLBLK	BLBLK SW: Horizontal blanking switch	56		1	56	
1 LBLBK	LEFT BLK: Left blanking	25		25		
2 RBLK	RIGHT BLK: Right blanking					
3 VBLBK	VBLBK SW: Vertical blanking switch	1		1	0	0
4 TBLK	UP BLK: Top blanking	4	15	15	15	15
5 BBLBK	LO BLK: Bottom blanking	5	15	15	15	15
6 VCAMP	V COMP: Vertical compensation	0	0	0	0	0
7 HCAMP	H COMP: Horizontal compensation	0	0	0	0	0
8 ACAMP	AFC COMP: AFC compensation	0	0	0	0	0
9 PCAMP	PIN COMP: Pin compensation	0	0	0	0	0
10 AFM	AFC MODE: AFC compensation	2		3		
11 VFRQ	V FREQ: Vertical frequency		1			
12 VON	V ON: Vertical drive on		1			
13 JUMP	IMP SW: Reference pulse jump switch		0			
14 VDRV SW	Vertical drive switch	1	1	1	1	1
15 VOST	RST SW: Vertical drive start switch	0	0	0	0	0
16 FEVDC	EV DC: Pin DC level shift		0			
17 AKBT	AKBTIM: AKB timing	9	9	9	9	9

Component I/F & Sync Separation (XA2151)

Reg No. & Name	FUNCTION	480i	1080P	1080i	720P
0 MTRX	MAT OUT	15.75kHz	31.50kHz	33.75kHz	45kHz
1 GAIN	GAIN SEL	0	0	1	1
2 CBGAIN	CBGAIN	0	0	0	0
3 VTC	VTC	9	9	9	9
4 HWID	H WIDTH	1	1	1	1
5 HSEP	HSEP SEL	Video5	Video6	Sub	Sub
6 TEST	TEST	0	0	0	0
7 FRGB	FRGB	0	0	0	0
8 HMASK	Hsync masking in vertical race	1	0	0	1

Audio Processor (AP) BH3868FS

Reg No. & Name	FUNCTION	0	7	10	7
0 ISVOL	Volume Offset for Volume	0			
1 SBAL	Balance Offset for Balance		7		
2 SBAS	Base Offset for Bass			10	
3 STRE	Treble Offset for Treble				7
4 BBILP	B/Bf low pass filter				0
5 BBHP	B/Bf high pass filter				2
6 SREF	Surround effect			11	
7 AGC	Auto gain control				0
8 BBIE	BBIE on/off				0

TruSurround (TRUS) NJM2180

Reg No. & Name	FUNCTION	2	0
1 TSMD	Trusurround effect selection		
0 ATT			

DLBY NJM1106

Reg No. & Name	FUNCTION	0	0	0	0
0 DBMD		0			
1 SCH		0			
2 ADSW		0			
3 CCH		0			
4 DELY		0			
5 SSEL		0			

MID-1 (Display Data : Output)

Reg.No & Name	FUNCTION
	(A) Display Data Only One)
0 DHFH	H active display area phase (for 4:3)
1 DYPH	V active display area phase 110
2 DHRH	H active display area size 20
3 DVAR	H active display area size 240
4 DHFW	display H pulse width 135
5 DYPW	display V pulse width 55
22 DPBW	display HL switch 5
23 MDL	model select (16:9:4:3) 1 (fixed)
	0
	Data
6 DYCD	display output Y,C delay correction 2
7 SDYS	display output YS signal delay select 1
	Normal
	Favorite 9
	Others 0
8 MDHP	main display picture H position 154
10 MDHS	main display picture H size 162
	Single 480x480P 149
	Single 720P 30
9 MDVP	main display picture V position 30
11 MDVS	main display picture V size 120
	Index 120
	Others 97
12 MLHP	multi picture mode H position 36
13 MLVP	multi picture mode V position 31
	Favorite 31
14 SDHS	sub display picture H position 166
15 SDVS	sub display picture V position 20
	Favorite 20
16 SDHS	sub display picture H size 44
17 SDVS	sub display picture V size 29
	Favorite 29
18 PDHP	(PhP Large mode H position) -
19 PDVS	(PhP Large mode V position) -
	(PhP Size Not Used) -
20 PDHS	(PhP Large mode H size) -
21 PDVS	(PhP Large mode V size) -
22 JSingle Others	Single Others 5
24 BCOL	Background Y level 5

MID-2 (Active Data for DRC : INPUT)

Reg.No & Name	FUNCTION
	(A) MID Mode, Wide mode, Input Signal Format
	Singles(Normal)
0 DRHP	DRCH active area position RF, Video, YC 111 YPhPr RF, Video, YC 111 YPhPr
1 DRHS	DRCH active area size 178 178 110 110
2 DRVP	DRCV active area position 37 37 178 178
3 DRVS	DRCV active area size 120 120 120 120
	Twin, Favorite
	Singles(Other)
0 DRHP	DRCH active area position RF, Video, YC 131 YPhPr RF, Video, YC 141 YPhPr
1 DRHS	DRCH active area size 166 166 142 141
2 DRVP	DRCV active area position 54 54 162 162
3 DRVS	DRCV active area size 112 112 110 110
	mono
	Index
	Twin, Right
	Index-Small
0 DRHP	DRCH active area position RF, Video, YC 139 YPhPr RF, Video, YC 143 RF
1 DRHS	DRCH active area size 164 164 138 138
2 DRVP	DRCV active area position 50 50 166 166
3 DRVS	DRCV active area size 114 114 112 112

MID-3 (Active Data for A/D (VDO) : INPUT)

Reg.No & Name	FUNCTION	Single			
		(A) MD mode, Wide mode, Input Signal Format	480P	720P	YUV/P, No Signal
0	VDDHP	VDO H active area position	[169]	95	205
1	VDHS	VDO H active area pixel size	[166]	108	226
2	VDVME	VDO V active area even position	[37]	24	37
3	VDVS	VDO V active area line size	[120]	180	56
			480P	Twin, Favorite	720P
0	VDDHP	VDO H active area position	[128]	94	111
1	VDHS	VDO H active area pixel size	[155]	150	99
2	VDVME	VDO V active area even position	[53]	126	50
3	VDVS	VDO V active area line size	[112]	126	168

10 of 10

		Index		Index		Index	
		Small	Large	Small	Large	Small	Large
0	VDPH	VDO H active area position		480P	1080i	115	179
1	VDHS	VDO H active area pixel size		136	102	98	199
2	VDVH	VDO V active area even position		152	147	38	24
3	VDVS	VDO V active area line size		57	44	164	56
				110	123		
						Index	Small
							RPt
0	VDPH	VDO H active area position		480P	1080i	166	204
1	VDHS	VDO H active area pixel size		132	99	112	211
2	VDVH	VDO V active area even position		154	149	99	24
3	VDVS	VDO V active area line size		51	34	48	56
				113	128	169	56
						Index	Small
							RPt
						1080i	1080i
							720P
4	VDVO	VDO V active area line size		Rt, Video, S-Video, YPbPr, 480i	480P	0	0
5	VCPO	VDO V active area odd position		0	0	0	0
6	VCWD	VDO clamp pulse output timing		95	70	40	40
7	VYCD	VDO clamp pulse width		6	3	3	3
8	NSTP	VDO Blk phase direct stop line count		0	0	0	0
9	VDSTT	VDO Blk phase direct start line count		-	119	160	146
10	WHSC	VDO H sync cycle		-	4	0	-
				130	-	-	-

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On-Screen Display (OSD)

Reg.No & Name	FUNCTION
0 HPOS	OSD horizontal position
1 HPDF	Horizontal position for Favorite mode
2 VPDS	OSD vertical position
3 VPOF	Vertical position for P&P (Twin) mode
4 VPOI	Vertical position for P&P (Twin) mode
5 WSLT	Noiselevel detection data thresholds for SNNR data (read data)
6 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
7 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
8 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
9 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
10 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
11 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
12 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
13 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
14 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
15 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
16 WSLS	Noiselevel detection data thresholds for SNNR data (read data)

SNNR

Reg.No & Name	FUNCTION
0 SNNR	SNNR data setting
1 SNFX	Selection of SNNR data setting
2 WSLT	Noiselevel detection data thresholds for SNNR data (read data)
3 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
4 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
5 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
6 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
7 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
8 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
9 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
10 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
11 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
12 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
13 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
14 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
15 WSLS	Noiselevel detection data thresholds for SNNR data (read data)
16 WSLS	Noiselevel detection data thresholds for SNNR data (read data)

SNNR-0/1/2/3
SNNR Setting based on WSL Data

3 CPFG Related to 3D-COMB (up/D64802) #19 YPFEG settings

4 CPFT Related to 3D-COMB (up/D64802) #18 YPF settings

5 CCOR Related to 3D-COMB (up/D64802) #20 YFCO settings

6 CHCG Related to 3D-COMB (up/D64802) #21 YHCG settings

7 CFCG Related to 3D-COMB (up/D64802) #16 VAPC settings

8 3SHP Related to CXA21503 #6 SHA#P settings

9 MIDD Related to CXA21503 #3 #19 MIDE settings

10 SHFP Related to CXA21501 #4 #14 USHP settings

11 SYFI Related to CXA21503 #3 #10 FFLV settings

12 SCDS Related to CXA21503 #3 #11 CDSP settings

13 SLTI Related to CXA21503 #3 #12 LTLV settings

14 SCTI Related to CXA21503 #3 #14 CTLV settings

15 SVML Related to CXA21503 #3 #15 UVML settings

16 SYMC Related to CXA21503 #3 #16 MC settings

SNNR data is used for the (-) offset setting.

SNNR data is used for the direct setting.

SNNR data is used for the (+) offset setting.

ID-1 Detection

Reg.No & Name	FUNCTION
0 XAGL	XAGL Setting for memorizing or not the ID-1 detection status
1 LNJI	LNJI Setting for the multi-single-line ID-1 detection

Closed Caption Display & Parental Control (CCD&VCHIP)

Reg.No & Name	FUNCTION
0 HPRM	Horizontal position of CCD(Main)
1 HPRS	Horizontal position of CCD(Sub)
2 RND	OSD rounding control
3 CCDI	Intermission control
4 CRIP	CRI control & parity count
5 CRIT	Charge/Discharge timing control for slice voltage level
6 CHMK	Horizontal mask width
7 FPOL	Field polarity selection
8 LANG	Switch for CCD service/test data
9 DATA	Switch for CCD service/test data
10 VCHIP	Selection of Vchip controls

OPTIONS

Reg.No & Name	FUNCTION
0 DLY1	Power-On-to-R/LY timing = DLY1 x 50ms
1 DLY2	Power-On-Mute timing = DLY2 x 50ms
2 DLY3	Relay-On-to-start Bus communication
3 AGC	Selection of basic system settings
4 PCMX	Selection of advanced system settings
5 BRWX	Selection of sub picture related settings
6 RAMW	Selection of some reserved settings
7 SOFF	Selection of some reserved settings

ID

Reg.No & Name	FUNCTION
0 ID0	Selection of OSD Images & color system
1 ID1	Selection of composite & s-video inputs
2 ID2	Selection of audio-related controls
3 ID3	Selection of basic system settings
4 ID4	Selection of advanced system settings
5 ID5	Selection of sub picture related settings
6 ID6	Selection of some reserved settings
7 ID7	Selection of some reserved settings

P1 Engine

ITEM No.	ITEM Name	Contents				Contents				init(16:9)
		min	max	Normal	Zoom	W Zoom	HD	Normal	Zoom	
0	FDIS	Switch of display for fine adjustment data	0	1	-	-	-	0	2047	0
1	COPY	Service copy adjustment	0	1	-	-	-	0	51,980	57,980
2	ALCP	Service all copy adjustment	0	1	-	-	-	0	4095	51,72, 57,72
3	OSDH	Horizontal position of PIED service menu	1	255	22	-	-	0	4095	0
4	OSDV	Out vertical position of PIED service menu	1	255	100	100	60	0	51,655	57,655
5	FVSI	Start position of fine adjustment	0	15	0	14	15	0	4095	0
6	FVSP	Start list of fine adjustment	0	255	3	21	25	53	0	51,12,2, 57,12,2
7	VIDL	Value of VI delay	0	139	1	139	60	1	0	0
8	VICU	Value of VI count up	0	4095	454	598	387	0	0	0
9	VIOH	Value of VI offset upper data	0	255	5	5	79	0	-	0
10	VIOL	Value of VI offset lower data	0	255	0	0	0	0	3	51,0, 57,0
11	OEVLP	OddEven select position	0	4095	1036	-	-	-	-	-
12	COHP	Horizontal phase for rough adjustment	0	4095	0	-	-	-	-	-
13	34CS	Start center clamp position of H3 and H4 pulse	0	31	14	-	-	-	-	-
14	34CW	Width center clamp position of H3 and H4 pulse	0	31	0	-	-	-	-	-
15	FHPP	Horizontal phase for fine adjustment	0	4095	1104	-	-	-	-	-
16	TPHP	Horizontal phase for test pattern	0	4095	69	-	-	-	-	-
17	TPVP	Vertical phase for test pattern	0	255	55	111	79	15	0	-
18	DHPH	Horizontal phase for dynamic focus	0	4095	250	-	-	-	-	-
19	DHFG	Value of horizontal parabola wave for dynamic focus	-128	127	-70	-70	-70	-70	0	-
20	DFVG	Value of vertical parabola wave for dynamic focus	-128	127	-50	-50	-50	-50	0	-
21	DFDC	Value of center for dynamic focus	-128	127	127	127	127	127	0	-
22	DFV1	Value of VI saw wave for dynamic focus	-128	127	-50	-50	-50	-50	0	-
23	SDHP	Compensation of horizontal phases for shading	0	4095	422	-	-	-	-	-
24	SDHI	Value of horizontal saw wave for dynamic focus	-128	127	127	127	127	127	0	-
25	RVCS	Start position of Red vertical clamp	0	31	0	-	-	-	-	-
26	RYCW	Width of Red vertical clamp	0	31	0	-	-	-	-	-
27	GYCS	Start position of Green vertical clamp	0	31	0	-	-	-	-	-
28	GYCW	Width of Green vertical clamp	0	31	0	-	-	-	-	-
29	BYCS	Start position of Blue vertical clamp	0	31	0	-	-	-	-	-
30	BYCW	Width of Blue vertical clamp	0	31	0	-	-	-	-	-
31	RHCS	Start position of Red horizontal clamp	0	31	0	-	-	-	-	-
32	RHCW	Width of Red horizontal clamp	0	31	0	-	-	-	-	-

16:9 has Normal, Zoom, W Zoom, HD separately

init(16:9)

Normal Zoom W Zoom HD

67 VLOM Auto Regi. Pattern Lower middle vertical position

68 VLLOW Auto Regi. Pattern Lower vertical position

69 HLB Auto Regi. Pattern Left horizontal position

70 HLBHM Auto Regi. Pattern left middle horizontal position

71 HLRM Auto Regi. Pattern middle horizontal position

72 HRLM Auto Regi. Pattern right middle horizontal position

73 HRIV Auto Regi. Pattern right horizontal position

74 SFTF Switch to shift fast

75 ACTL Account timer counter lower byte

76 ACTH Account timer counter upper byte

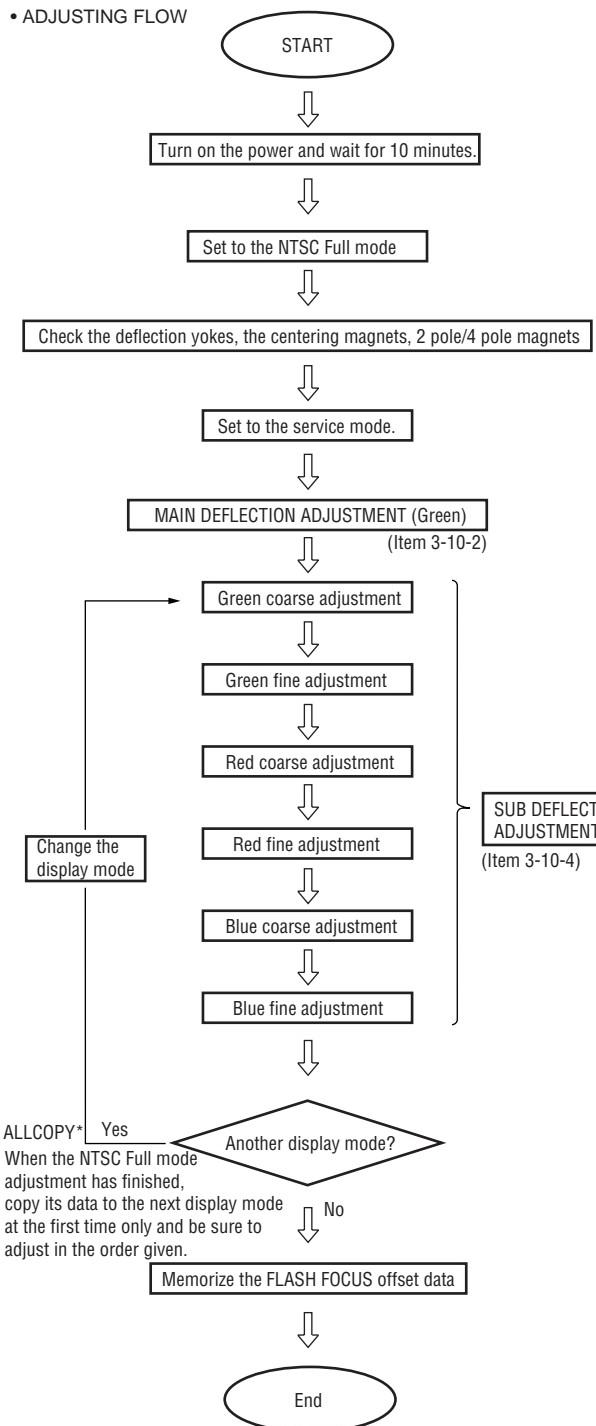
77 SLSW Auto Regi adjustment item select

P1 Engine

ITEM No.	ITEM Name	Contents				min	max	init(16:9)
		Normal	Zoom	W Zoom	HD			
33	GHCS	Start position of Green horizontal clamp	0	31	0	31	0	0
34	GHCW	Width of Green horizontal clamp	0	31	0	31	0	0
35	BHCS	Start position of Blue horizontal clamp	0	31	0	31	0	0
36	BHCW	Width of Blue horizontal clamp	0	31	0	31	0	0
37	BDYU	Vertical position for border line 1	0	2047	23	18	12	49
39	BDHL	Horizontal position for border line 1	0	2047	900	683	820	1039
40	BDHR	Horizontal position for border line 2	0	2047	148	1262	1262	1262
41	HBLD	Horizontal phase for output of HBlank out	0	4095	0	-	-	-
42	HBLW	Width for output of HBlank out	0	4095	0	-	-	-
43	PWM2	PWM2 output with setting of Reg IC	0	4095	51,3,15, 57,7,30	-	-	-
44	COGV	Green vertical center offset data for Auto Regi.	-128	127	-	-	-	-
45	CORV	Red vertical center offset data for Auto Regi.	-128	127	-	-	-	-
46	COBV	Blue vertical center offset data for Auto Regi.	-128	127	-	-	-	-
47	COGH	Green horizontal center offset data for Auto Regi.	-128	127	-	-	-	-
48	CORH	Red horizontal center offset data for Auto Regi.	-128	127	-	-	-	-
49	COBH	Blue horizontal center offset data for Auto Regi.	-128	127	-	-	-	-
50	ZOGV	Green horizontal size offset data for Auto Regi.	-128	127	-	-	-	-
51	ZORV	Red horizontal size offset data for Auto Regi.	-128	127	-	-	-	-
52	ZOBV	Blue horizontal size offset data for Auto Regi.	-128	127	-	-	-	-
53	ZOGH	Green horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
54	ZORH	Red horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
55	ZOBH	Blue horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
56	ZOOG	Green horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
57	ZORH	Red horizontal size offset data for Auto Regi.	-128	127	-	-	-	-
58	ZOBH	Blue horizontal size offset data for Auto Regi.	-128	127	-	-	-	-
59	ZOOG	Green horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
60	ZORH	Red horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
61	ZOOG	Blue horizontal linearly offset data for Auto Regi.	-128	127	-	-	-	-
62	ERR	Auto Regi. Error code	0	-	-	-	-	-
63	ADTM	AD data input timing of Auto Regi.	0	127	51,1,34, 57,13,4	-	-	-
64	VUP	Auto Regi. Pattern Upper vertical position	0	2047	51,3,48, 57,48	-	-	-
65	VUPM	Auto Regi. Pattern Upper middle vertical position	0	2047	0	-	-	-
66	VMD	Auto Regi. Pattern Middle vertical position	0	2047	51,5,15, 57,5,15	-	-	-

3-11. REGISTRATION ADJUSTMENT

- ADJUSTING FLOW

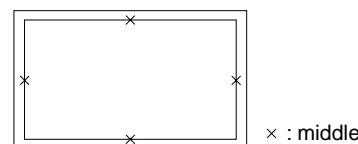


3-11-1. Setup for Adjustment

1. Marking

- 1) At the 4 insides of the screen, locate the middle. Use a tape measure to identify the middle.

2. Data Setting



- 1) Set NTSC Full mode.
- 2) Enter the Service mode, and select "PJE".

Note : When you replaced printed circuit boards or devices or CRTs, and when correction is drastically necessary, press “⑦” + “ENTER” buttons to initialize the data in the Projector Engine mode.

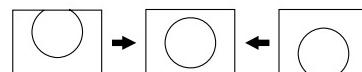
Press “MUTING” + “ENTER” buttons on the commander to write the data.

3-11-2. Main Deflection Adjustment

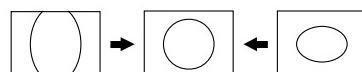
Note : Before this adjustment, input the data of PJE item No. 78-85, (See page 24).

1. Place the caps on the red and blue lenses so that only the green color is displayed.
2. Enter the monoscope signal and set to NTSC Full mode .
3. Enter the Service mode, and select “2150D-1” .
4. Adjust “0 VPOS” and “1 VSIZ” so that the picture is displayed in the center of screen.
5. Adjust “2 VSZO” for 1080i vertical size adjustment.

0 VPOS



1 V-Size



6. Select “2150D-2” and adjust “2 H-Size” so that the picture size is within the specification.

SPEC

Overscan Spec. = 9%

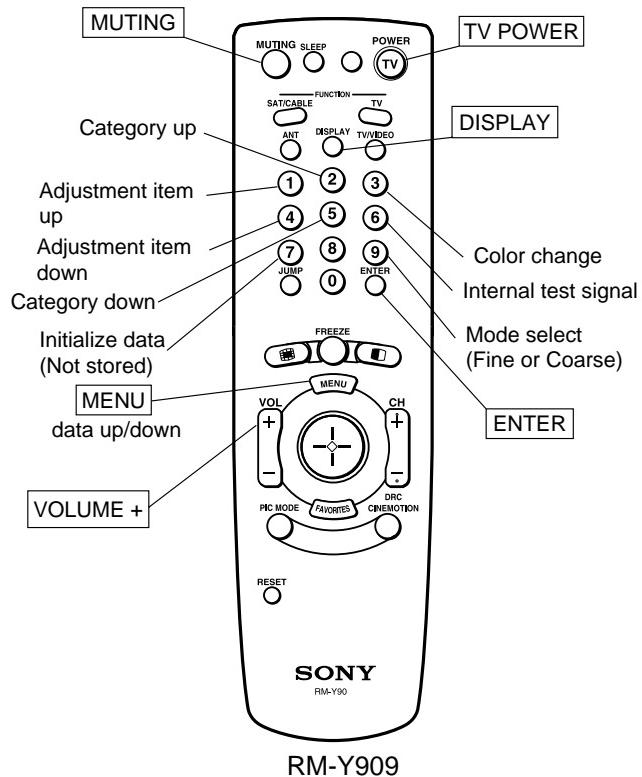
Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.

2 H-Size



7. Copy the data of NTSC Full mode to the other display mode and adjust in the other mode as the occasion demands.

3-11-3. Operation Method for Projector Engine Mode



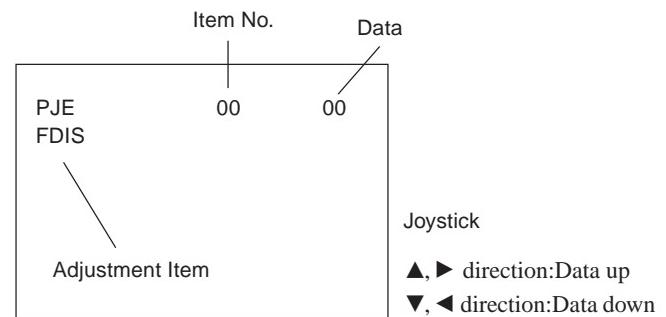
- Press joy stick : Switches marker moving method.
- (in fine adjustment mode)
- joystick (\blacktriangle , \blacktriangledown , \blacktriangleleft , \blacktriangleright) keys \Rightarrow ① and ④ buttons

Commander Function

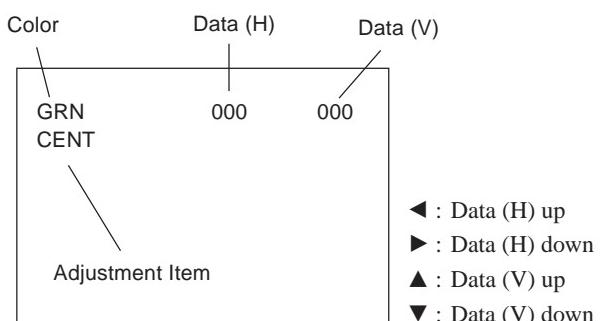
Buttons	Mode	Description
① + ENTER	READ	Writes data to NVM.
MUTING+ENTER	WRITE	Reads data from NVM.
⑦ + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. Operation Method for Coarse Adjustment

- 1) Enter the Service mode, and select "PJE".
- 2) Press "①" or "④" button on the commander to select the item, and use the joystick to change the data.



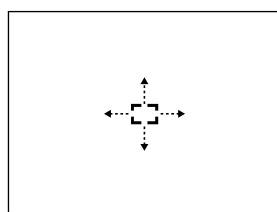
- 3) Select "GRN CENT". When BLU or RED is displayed, press "③" button on the commander to change the adjustment color in the order of GRN \Rightarrow BLU \Rightarrow RED.
- 4) In the GRN, BLU, or RED mode, move $\blacktriangle, \blacktriangledown$ direction the joystick can change the data in vertical direction, or $\blacktriangleleft, \blacktriangleright$ direction in horizontal direction.



- 5) Before returning to the Service mode, press "MUTING" + "ENTER" buttons on the commander to write the data. (Omission of this operation causes the set data to be returned to the data before adjustment)

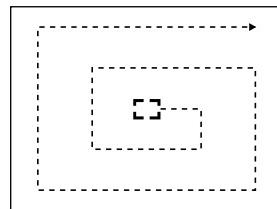
3. Operation Method for Fine Adjustment

- 1) Select the PJE mode.
 - 2) Select FDIS so that the data at each position can be displayed in the fine adjustment mode, and set the data to “01”.
 - 3) Press “⑨” button on the commander, and the fine adjustment mode will be active where a green marker appears in the center of screen (in the case of GRN mode).
 - 4) Press joystick, and the marker color will be switched between green (GRN mode) and white alternately.
 - 5) Use “①” or “④” button on the commander, or the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.
- When marker color is white.
(in this case, fine adjustment is disabled)



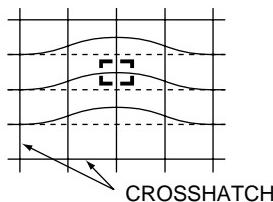
Operating the joystick can move the marker up, down, or to the left or right freely.

- When marker color is green. (GRN mode)

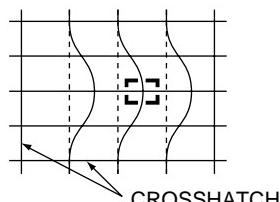


- ① : moves the marker clockwise from center to outside.
- ④ : moves the marker counterclockwise from outside to center.
- Fine adjustment can be made on the basis of marker position using ▲, ▼, ◀, ▶ direction of the joystick.

Move joystick ▲ direction



Move joystick ▶ direction



- 6) Press “⑨” button on the commander to return to the coarse adjustment mode.

3-11-4. PJE Adjustment (Sub Deflection Adjustment)

Adjustment ○ : Yes – : No

Adjustment Item	Adjustment Type		
	GRN	RED	BLU
	H/V	H/V	H/V
CENT	○/○	○/○	○/○
SKEW	○/○	○/○	○/○
SIZE	○/○	○/○	○/○
LIN	○/○	○/○	○/○
KEY	-/○	-/○	-/○
PIN	○/○	○/○	○/○
MLIN	○/-	○/-	○/-
MSIZ	○/-	○/-	○/-

Note: If the value of over the limit value, adjust these in the fine adjustment .

Coarse Data Limit Value.

Cent H 35±170 V 20±170, Size H-75max, Lin H Blu -425min, H Red 425max.

<Adjustment for NTSC Full Mode>

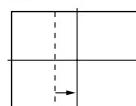
- The adjustment should be done in the numerical order given.

1. Green Adjustment

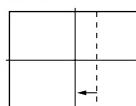
- 1) Place the caps on the red and blue lenses so that only the green color is displayed.
- 2) Enter the monoscope signal to set.
- 3) Select the PJE mode.
- 4) Press “⑥” button on the commander to display internal test signal (crosshatch).
- 5) Select “GRN CENT”, and adjust so that the picture coincide in the center of screen.

- GRN CENT (horizontally/vertically)

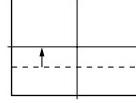
Push the joystick to ▶



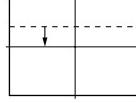
Push the joystick to ◀



Push the joystick to ▲

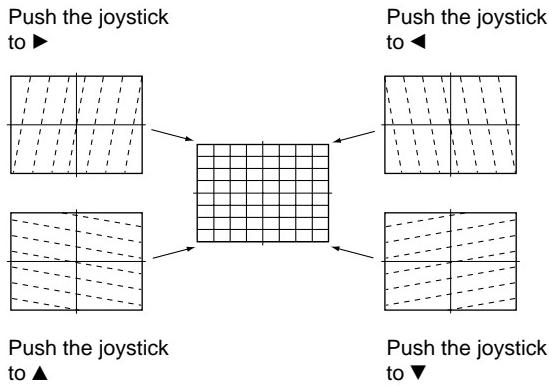


Push the joystick to ▼



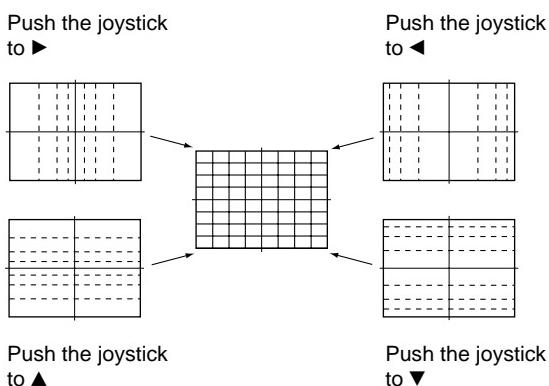
- 7) Select “GRN SKEW”, and correct the tilt of horizontal lines and vertical lines.

- GRN SKEW (horizontally/vertically)



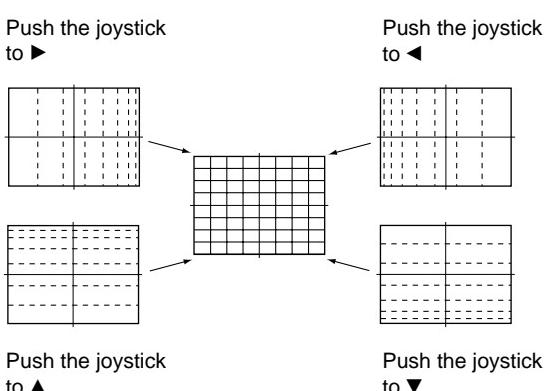
- 8) Select “GRN SIZE”, and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

- GRN SIZE (horizontally/vertically)



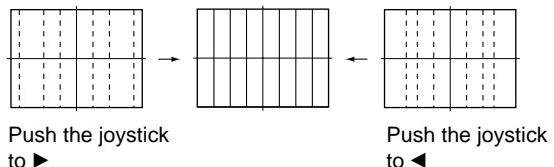
- 9) Select “GRN LIN”, and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

- GRN LIN (horizontally/vertically)



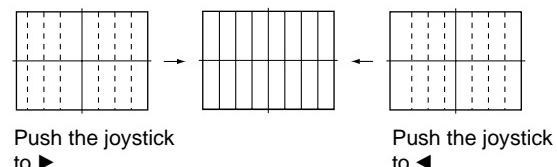
- 10) Select “GRN MSIZ”, and correct the space intervals for the horizontal section of the screen are equal.

- GRN MSIZ (horizontally)



- 11) Select “GRN MLIN”, and correct the sizes of the horizontal line at the center of the screen are symmetrical left and right.

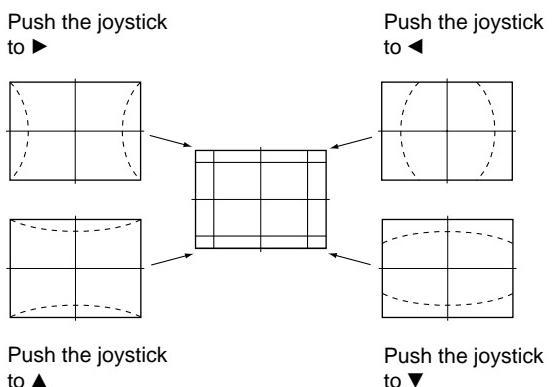
- GRN MLIN (horizontally)



Note: The SIZE and LIN, MSIZ and MLIN adjustments are affected each other.
So adjust these mutually if necessary.

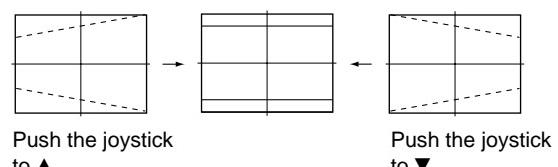
- 12) Select “GRN PIN”, and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

- GRN PIN (horizontally/vertically)



- 13) Select “GRN KEY”, and adjust so that upper and lower horizontal lines on the screen become parallel.

- GRN KEY (vertically)



Note: The VPIN and KEY adjustments are affected each other.
So adjust these mutually if necessary.

- 14) Press “⑨” button on the commander to enter the fine adjustment mode.
- 15) Make fine adjustment so that horizontal lines and vertical lines become straight.
- 16) Press “⑨” button on the commander to return to the coarse adjustment mode.

2. Red Adjustment

- 1) Place a cap on the blue lens so that green and red colors are displayed.
- 2) Press “③” button on the commander to select RED mode.
- 3) Adjust the following items so that red lines overlap with green lines.

- RED CENT (horizontally/vertically)
- RED SKEW (horizontally/vertically)
- RED SIZE (horizontally/vertically)
- RED LIN (horizontally/vertically)
- RED MSIZ (horizontally)
- RED MLIN (horizontally)
- RED PIN (horizontally/vertically)
- RED KEY (vertically)

- 4) Press “⑨” button on the commander to enter the fine adjustment mode.
- 5) Make fine adjustment so that horizontal lines and vertical lines overlap with green lines.
- 6) Press “⑨” button on the commander to return to the coarse adjustment mode.

3. Blue Adjustment

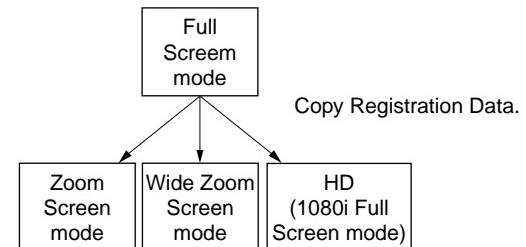
- 1) All colors are displayed.
- 2) Press “③” button on the commander to select BLU mode.
- 3) Hereinafter, use same manner as that of red adjustment to adjust so that the blue lines overlap with green and red lines.

4. Registration Data Writing

- 1) After each adjustment of green, blue, and red for the NTSC Full mode finished, press “MUTING”+ “ENTER” buttons on the commander to write registration data to the NVM.

<Copy All Registration Data to Other modes>

1. Make sure that the adjustment for NTSC Full mode finished and the data have already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to “01”, and press “MUTING”+“ENTER” buttons on the commander.
4. The data of NTSC Full mode are copied to all other modes.



5. Check in the other mode and adjust as the occasion demands. Be sure to write data in each mode.

3-12. AUTO CONVERGENCE OFFSET

This adjustment must be performed after the registration adjustment was made or after readjustment was made by any reason.

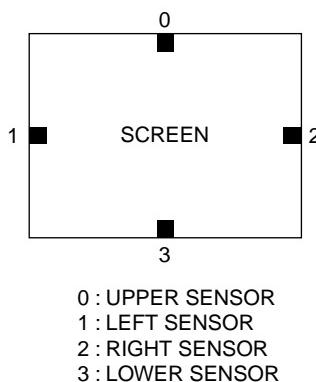
1. Darken the periphery of this set.
2. Enter the monoscope signal to set the NTSC Full mode.
3. Select the PJE mode.
4. Press “FLASH FOCUS” button on the front panel of the set. (The offset value is now automatically stored)
5. Select “ERR” of PJE mode. Confirm ERR is “00”. If ERR is not “00”, recheck. (Refer to 3-12.)
6. Exit the service mode.

3-13. AUTO REGISTRATION ERROR CODE LIST

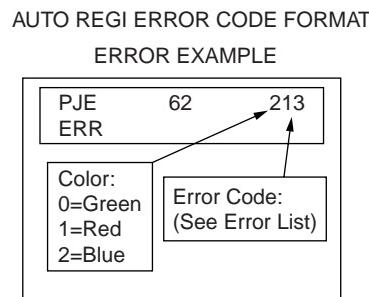
If an error code is displayed after the set has been fully adjusted, correctly, please check the following items : position, tilt and sizing. If either of these adjustments are off, even slightly, the auto registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns are being flashed on the screen for the sensor to read. Therefore, auto registration (called auto convergence) cannot operate properly causing an error code to be displayed. In order for this function to operate properly, correct position, tilt and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	REMEDY
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "64 VUP" if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "69 HLB" if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "73 HRIV" if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "68 VLOW" if necessary.
20	Sensor 0 high output	Check sensor 0 and circuit.
21	Sensor 1 high output	Check sensor 1 and circuit.
22	Sensor 2 high output	Check sensor 2 and circuit.
23	Sensor 3 high output	Check sensor 3 and circuit.
30	V CENT or SKEW adjustment loop overflow	Check "66 VMID" data and check registration condition.
31	H CENT or SKEW adjustment loop overflow	Check "71 HMID" data and check registration condition.
32	H LIN or SIZE adjustment loop overflow	Check "71 HMID" data and check registration condition.
40	V CENT regi data overflow	Check "66 VMID" data and confirm V CENT data (all mode) is not near 511.
41	H CENT regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
42	V SKEW regi data overflow	Check "66 VMID" data and confirm V SKEW data (all mode) is not near 511.
43	H SKEW regi data overflow	Check "71 HMID" data and confirm H SKEW data (all mode) is not near 511.
44	H LIN regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
45	H SIZE regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
50	V CENT regi data overdrw	Check "66 VMID" data and confirm V CENT data (all mode) is not near -512.
51	H CENT regi data overdrw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
52	V SKEW regi data overdrw	Check "66 VMID" data and confirm V SKEW data (all mode) is not near -512.
53	H SKEW regi data overdrw	Check "71 HMID" data and confirm H SKEW data (all mode) is not near -512.
54	H LIN regi data overdrw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
55	H SIZE regi data overdrw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
60	H or V CENT offset overflow	Check "71 HMID" data and check "66 VMID" data.
61	H or V SKEW offset overflow	Check SKEW adjustment.
62	H SIZE or LIN offset overflow	Check "71 HMID" data, check "66 VMID" data and check SIZE and LIN adjustment.
70	H or V CENT offset overdrw	Check "71 HMID" data and check "66 VMID" data.
71	H or V SKEW offset overdrw	Check SKEW adjustment.
72	H SIZE or LIN offset overdrw	Check "69 HLB" data, check "73 HRIV" data and check SIZE and LIN adjustment.
80	SIZE limit error	Check that H SIZE is negative and not near zero.

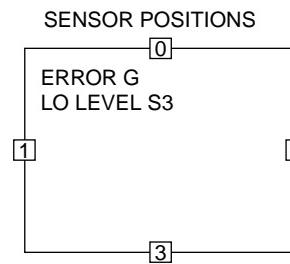
[SENSOR POSITION]

Error codes in normal (customer) mode are not displayed. You must enter PJED service mode to see to the error code.



Example: Blue low Level Sensor 3
0-Green
1-Red
2-Blue

When executing flash focus in service mode, the error will be displayed in text format (see below).



SECTION 4

CIRCUIT ADJUSTMENTS

4-1. P & P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
2. VIDEO MODE : Pro
PICTURE : maximum
COLOR : minimum
RGB Signal : off
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
Check points : CN13 pin C20 (Main)
(A Board) : CN13 pin A19 (Sub)
5. Select “2103-1-02”(Main scon), and adjust so that the waveform level of VWB is $1.11 \pm 0.03\text{Vp-p}$.
6. Select “2103-2-02”(Sub scon), and adjust so that the waveform level of VWB is $1.15 \pm 0.03\text{Vp-p}$.
7. Write the data into memory.

MUTING → **ENTER**

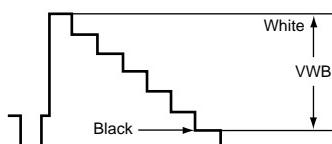


Fig. 4-1

4-2. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
2. VIDEO MODE : Pro
PICTURE : maximum
COLOR : minimum
RGB Signal : off
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
Check points : CN13 pin C20 (Main)
(A Board) : CN13 pin A19 (Sub)
5. Select “2103-1-02”(Main scon), and adjust so that the waveform level of VWB is $1.11 \pm 0.03\text{Vp-p}$.
6. Select “2103-2-02”(Sub scon), and adjust so that the waveform level of VWB is $1.15 \pm 0.03\text{Vp-p}$.
7. Write the data into memory.

MUTING → **ENTER**

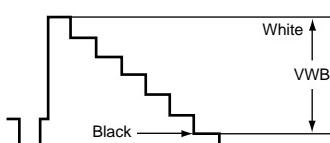


Fig. 4-2

4-3. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)

1. Receive the signal.
2. VIDEO MODE : Pro
PICTURE : maximum
COLOR : center
RGB Signal : on
3. Set to P & P mode, set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE”(Main), and adjust them to have $\text{VB1} \leq \text{VB4}$ and $\text{VB2} \leq \text{VB3}$ in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE”(Sub), and adjust them to have $\text{VB1} \leq \text{VB4}$ and $\text{VB2} \leq \text{VB3}$ in the waveform levels.
7. Write the data into memory.

MUTING → **ENTER**

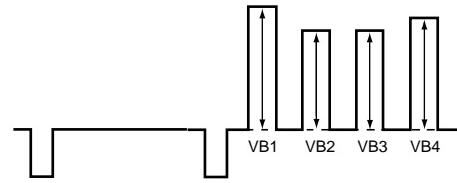


Fig. 4-3

4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)

1. Receive the signal.
2. VIDEO MODE : Pro
PICTURE : maximum
COLOR : center
RGB Signal : on
3. Set to P & P mode, set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE”(Main), and adjust them to have $\text{VB1} \leq \text{VB4}$ and $\text{VB2} \leq \text{VB3}$ in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE”(Sub), and adjust them to have $\text{VB1} \leq \text{VB4}$ and $\text{VB2} \leq \text{VB3}$ in the waveform levels.
7. Write the data into memory.

MUTING → **ENTER**

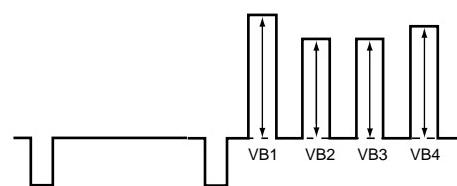


Fig. 4-4

4-5. BLUE OFFSET ADJUSTMENT

1. Receive the all black (1080i, component) signal with VIDEO 5 input, and set PICTURE to maximum.
2. Connect an oscilloscope between CN5 ⑦ pin (B) on the A board and ground.
3. Set in the service mode and select the category “ 2150D-2 ”.
4. Adjust “ 3 SLIN ” so that the waveform level is 2.20 ± 0.05 Vp-p.
5. After adjustment finished, press “ **MUTING** ” +“ **ENTER** ” buttons on the commander to write the data to the NVM.
6. Receive the RF signal and change the wide to mode to “ Wide Zoom ” Copy the same data to “ 3 SLIN ”.

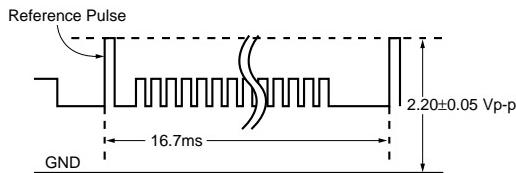


Fig. 4-5

SECTION 5**SAFETY RELATED ADJUSTMENTS****[D BOARD]****5-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT**

When replacing the following components marked with **█** on the schematic diagram always check HV regulation, and if necessary re-adjust.

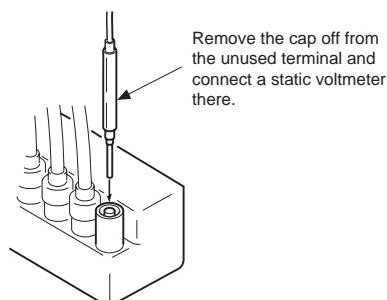
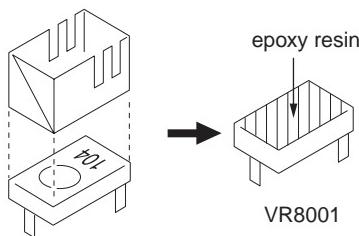
- █:** VR8001
- █:** C8079, C8083, C8090, C8129, D8013, D8015
D8038, D8043
IC8006
Q8021, R8055, R8099, R8102, R8128, R8129,
R8131, R8139, R8140, R8142, R8153, R8163,
R8223, R8230
T8004 (LOT), T8005 (FBT)
HV block, D board

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Repeat steps 1 and 2 as above.
4. Confirm that the static voltmeter reading is 31.0 ± 0.4 V.
5. If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 as shown below and apply sufficient amount of epoxy resin around VR8001.

**Fig. 4-1****Fig. 4-2****5-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT**

When replacing the following components marked with **█** on the schematic diagram always check hold-down voltage and if necessary re-adjust.

- █:** VR8002
- █:** C8054, C8086, C8088, C8100, C8104,
C8118, C8123, C8124
D8019, D8020, D8022, D8028, D8036
FB8001
IC8008
Q8035, Q8038
R8035, R8043, R8159, R8166, R8171,
R8196, R8201
T8004 (LOT), T8005 (FBT)
HV block, D board

OPERATION CHECK

1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038(JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038(JW171) on "D" and GND, then confirm that the HV-Prot circuit works.(Raster disappears.)
Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connet an externel 10kΩ VR at CN8015 and adjust this VR so that the high voltoge is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at 34.50 ± 0.50 kV reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

[G BOARD]**5-3. +B MAX VOLTAGE CONFIRMATION**

The following adjustments should always be performed when replacing IC501, R5032.

1. Supply 130VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage of TP +B 135V is less than 137.0Vdc.
4. If step 4 not satisfied , replace IC501 and repeat above steps.

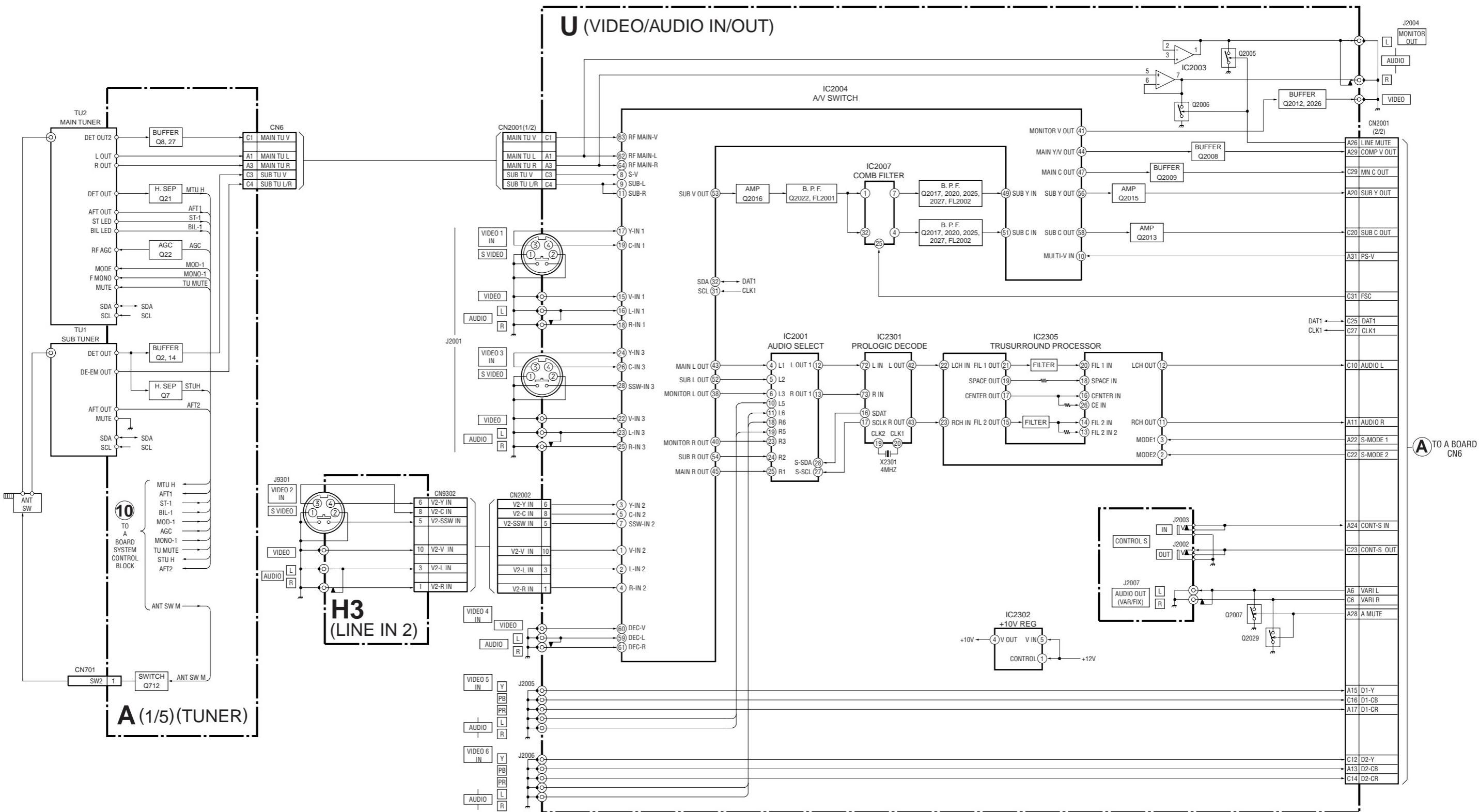
5-4. +B OVP CONFIRMATION

1. Add to low voltage power supply between to TP. 5001 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.
Operate :less than 2.50V

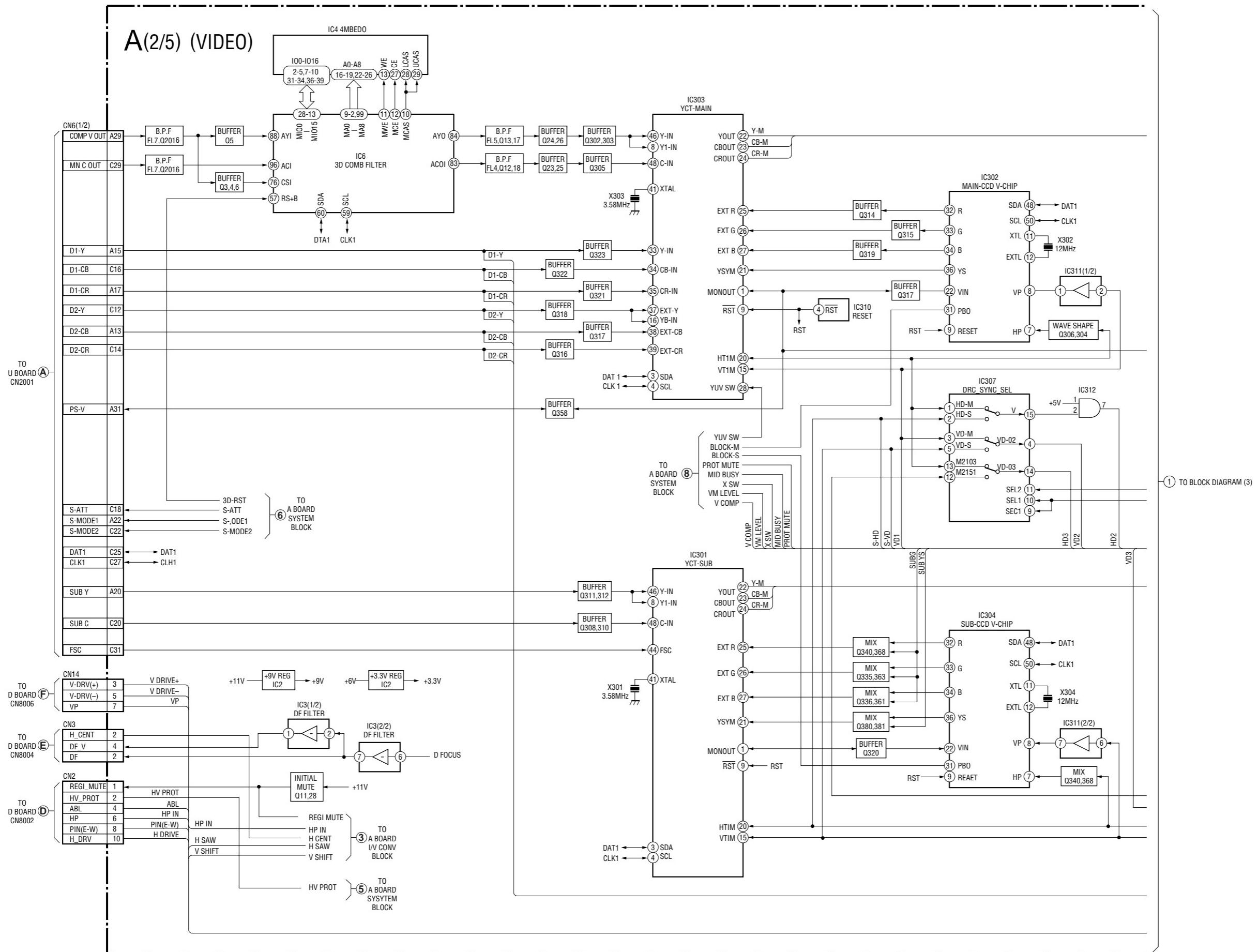
**SECTION 6
DIAGRAMS**

KP-51HW40/57HW40
RM-Y909 RM-Y909

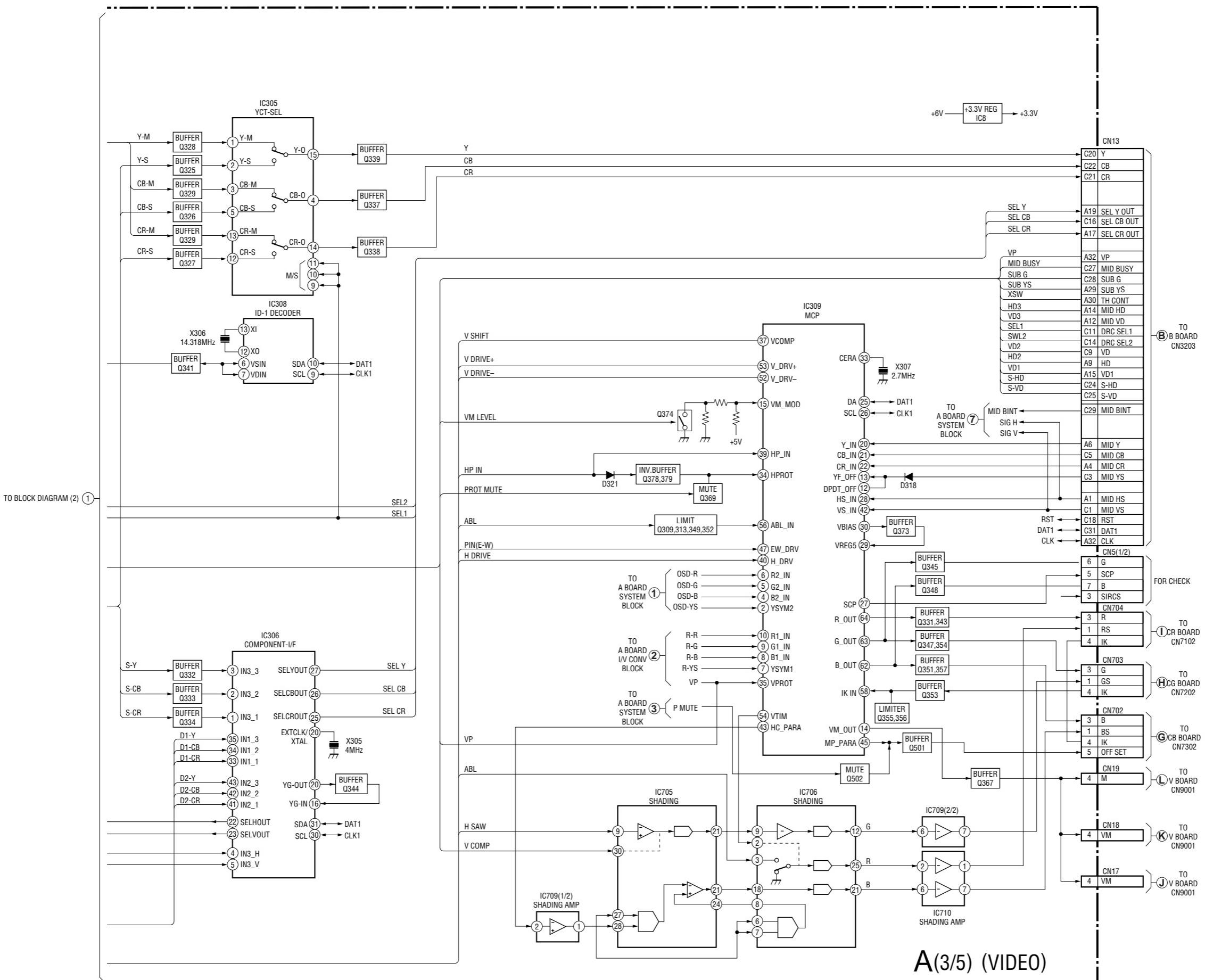
6-1. BLOCK DIAGRAM (1)



BLOCK DIAGRAM (2)

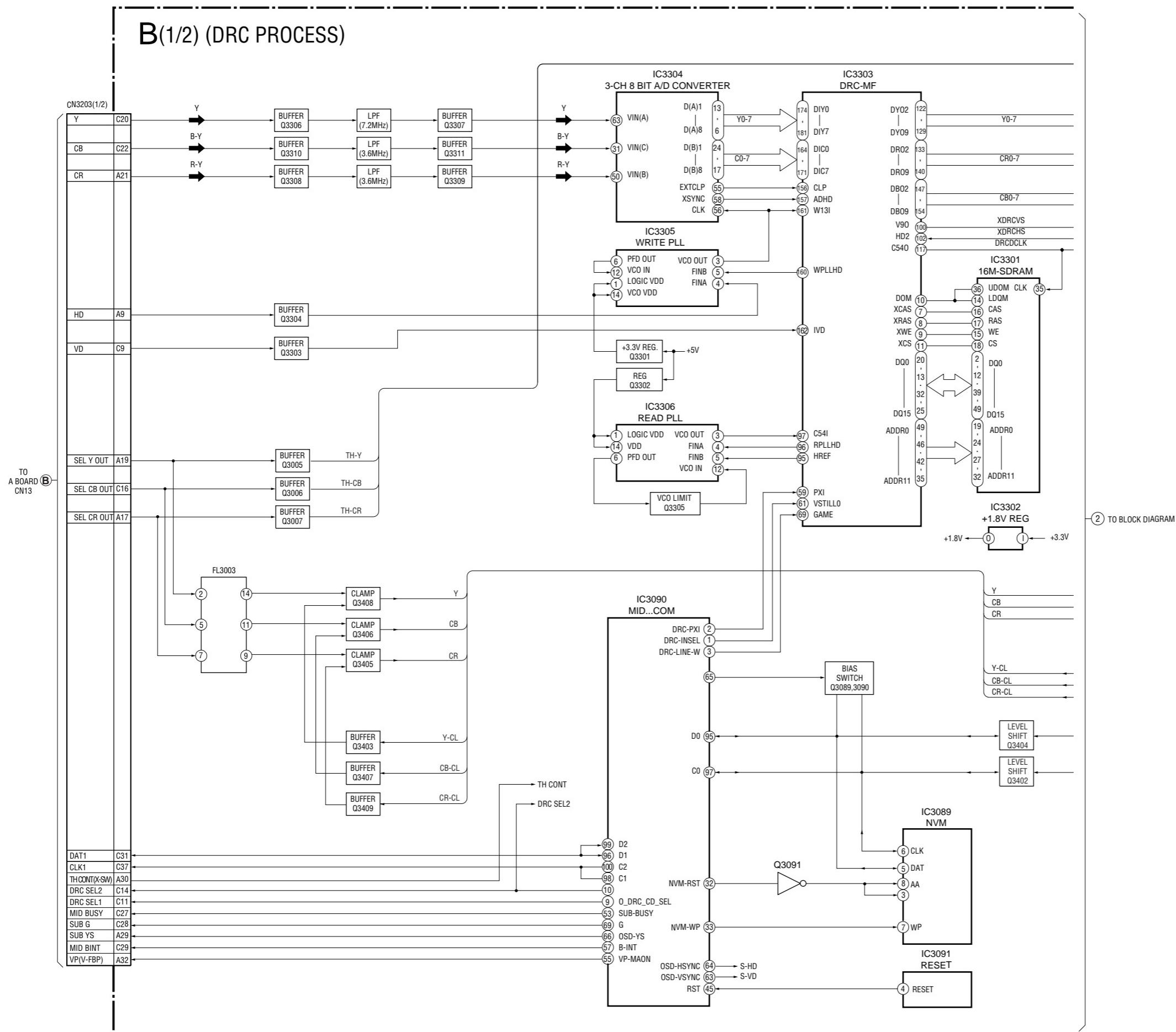


BLOCK DIAGRAM (3)

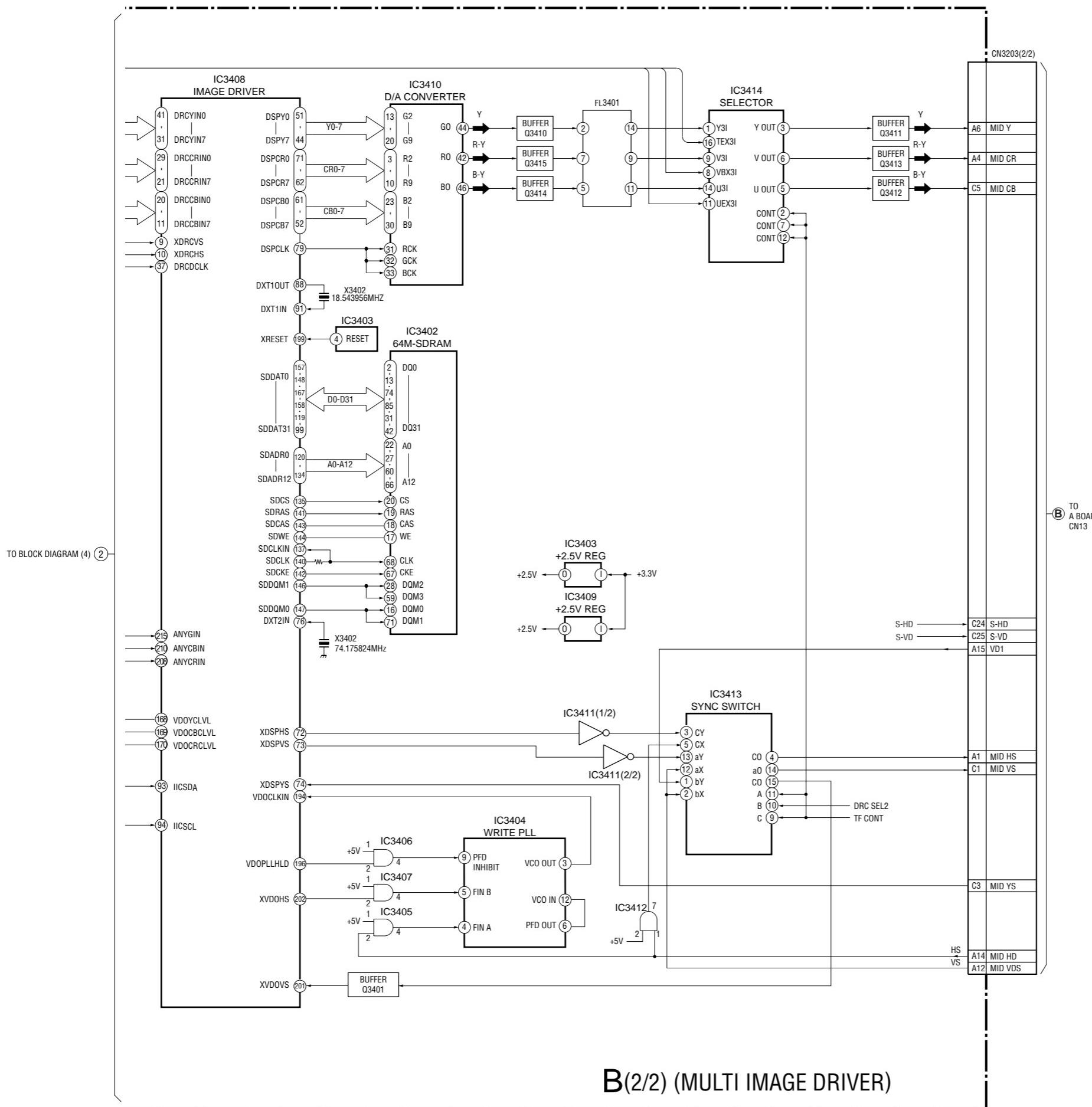


BLOCK DIAGRAM (4)

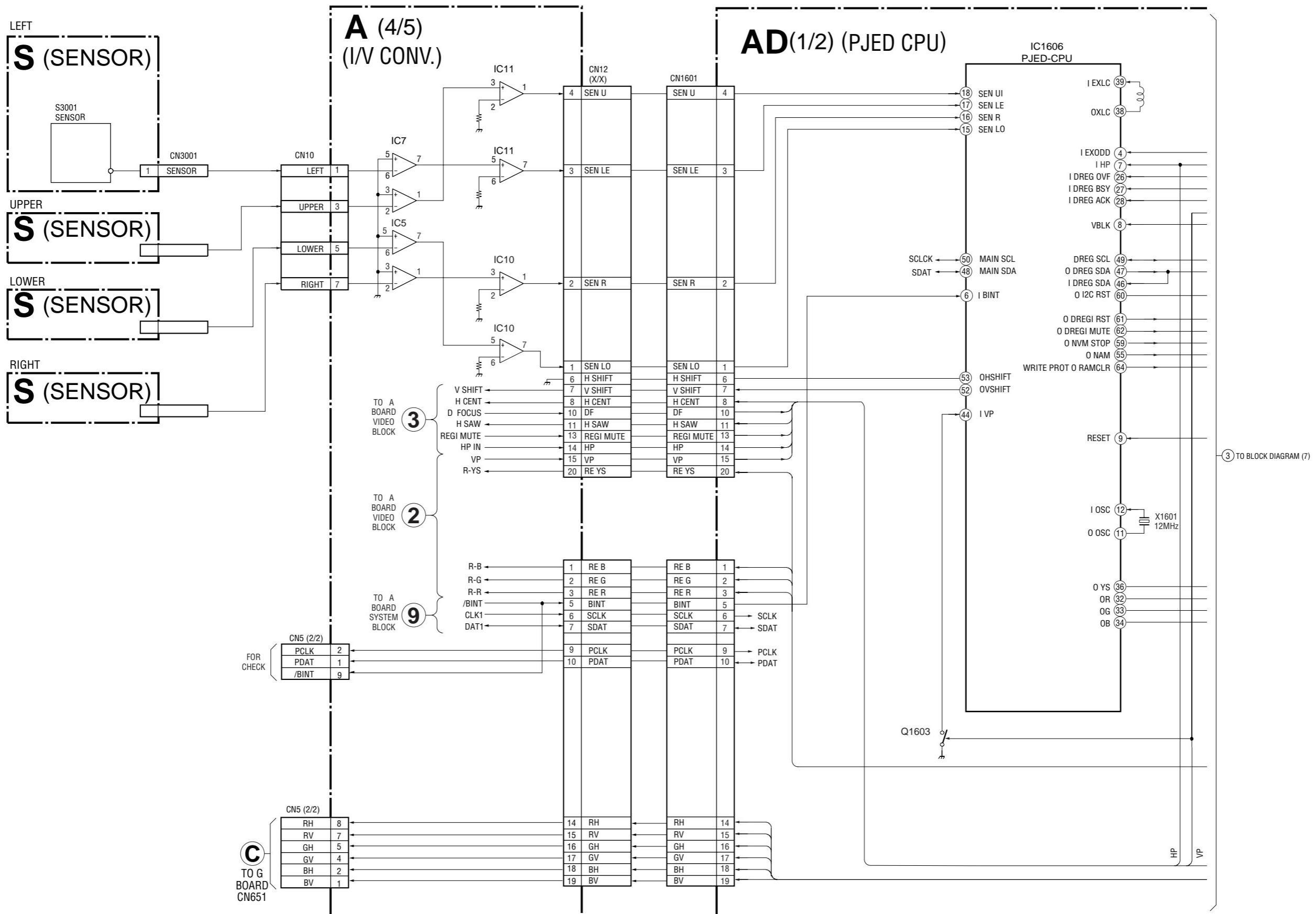
B(1/2) (DRC PROCESS)



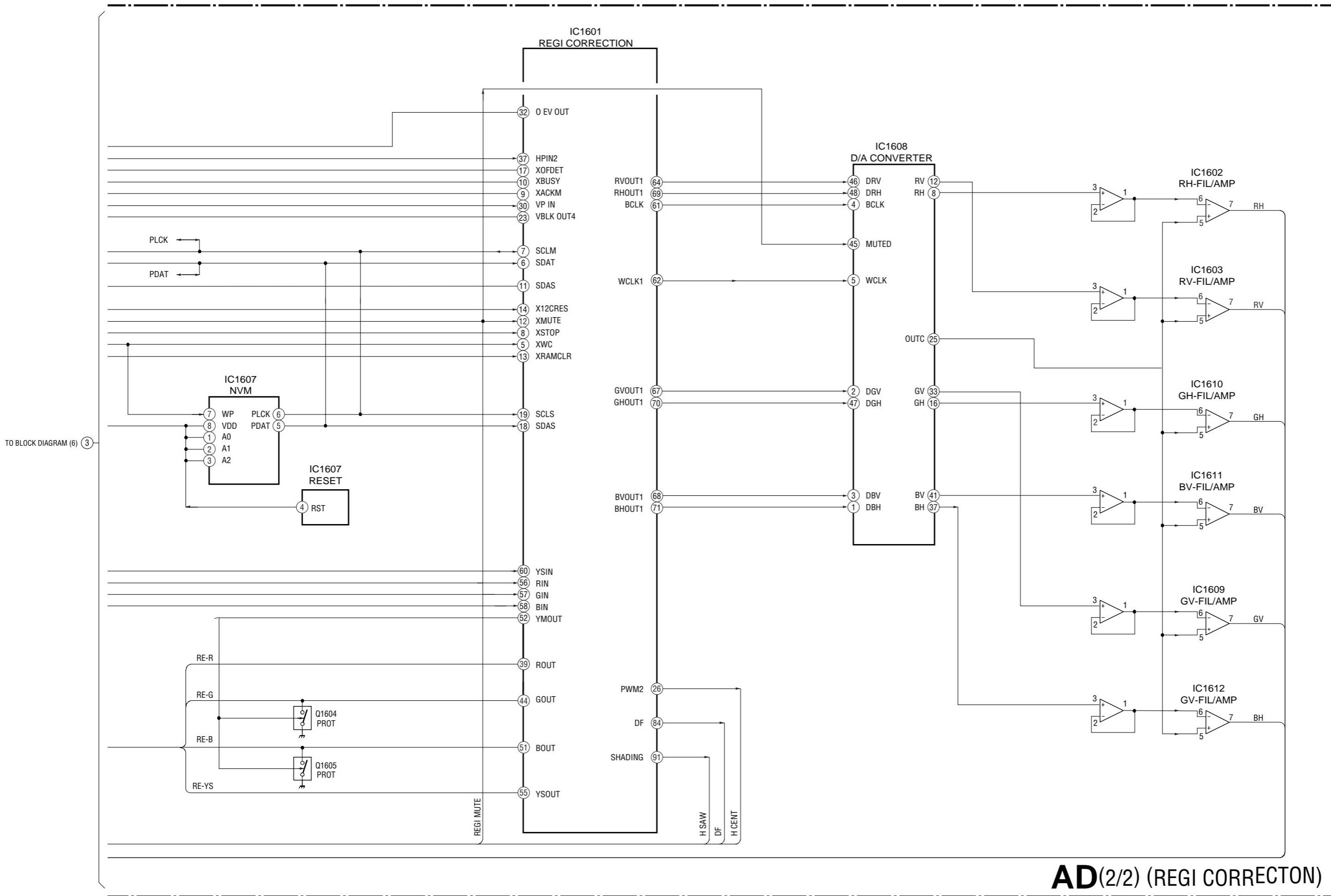
BLOCK DIAGRAM (5)



BLOCK DIAGRAM (6)

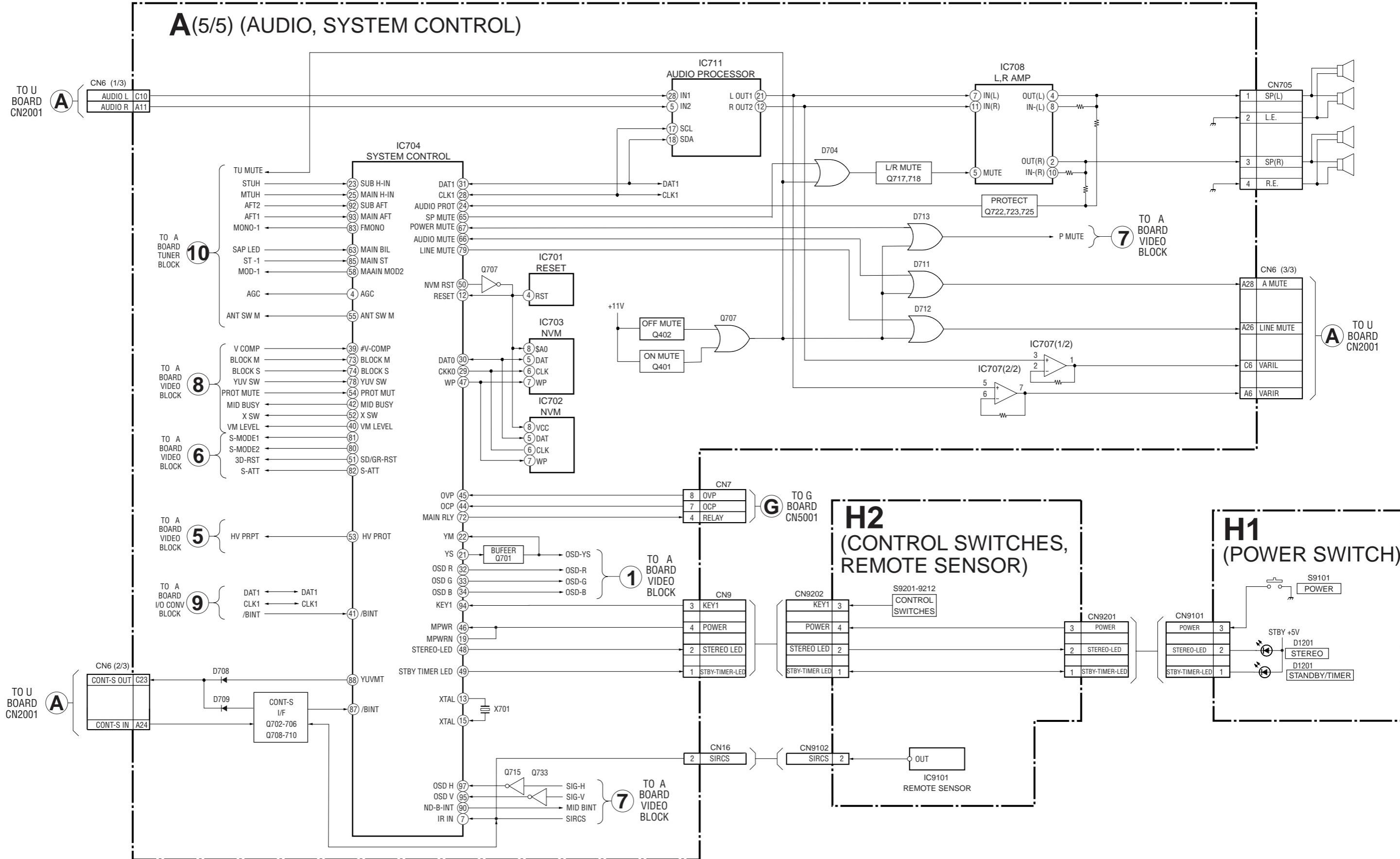


BLOCK DIAGRAM (7)

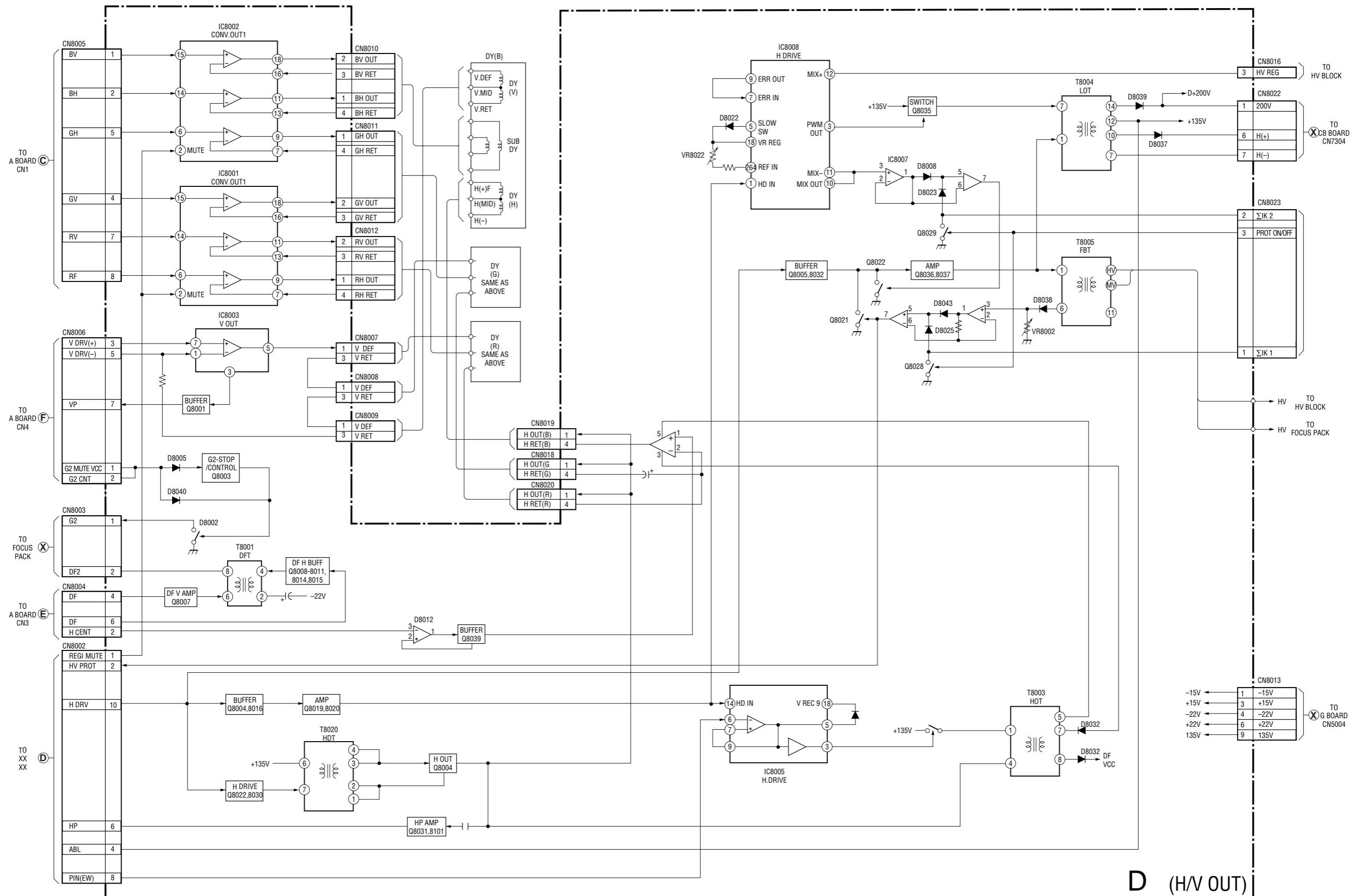


AD(2/2) (REGI CORRECTON)

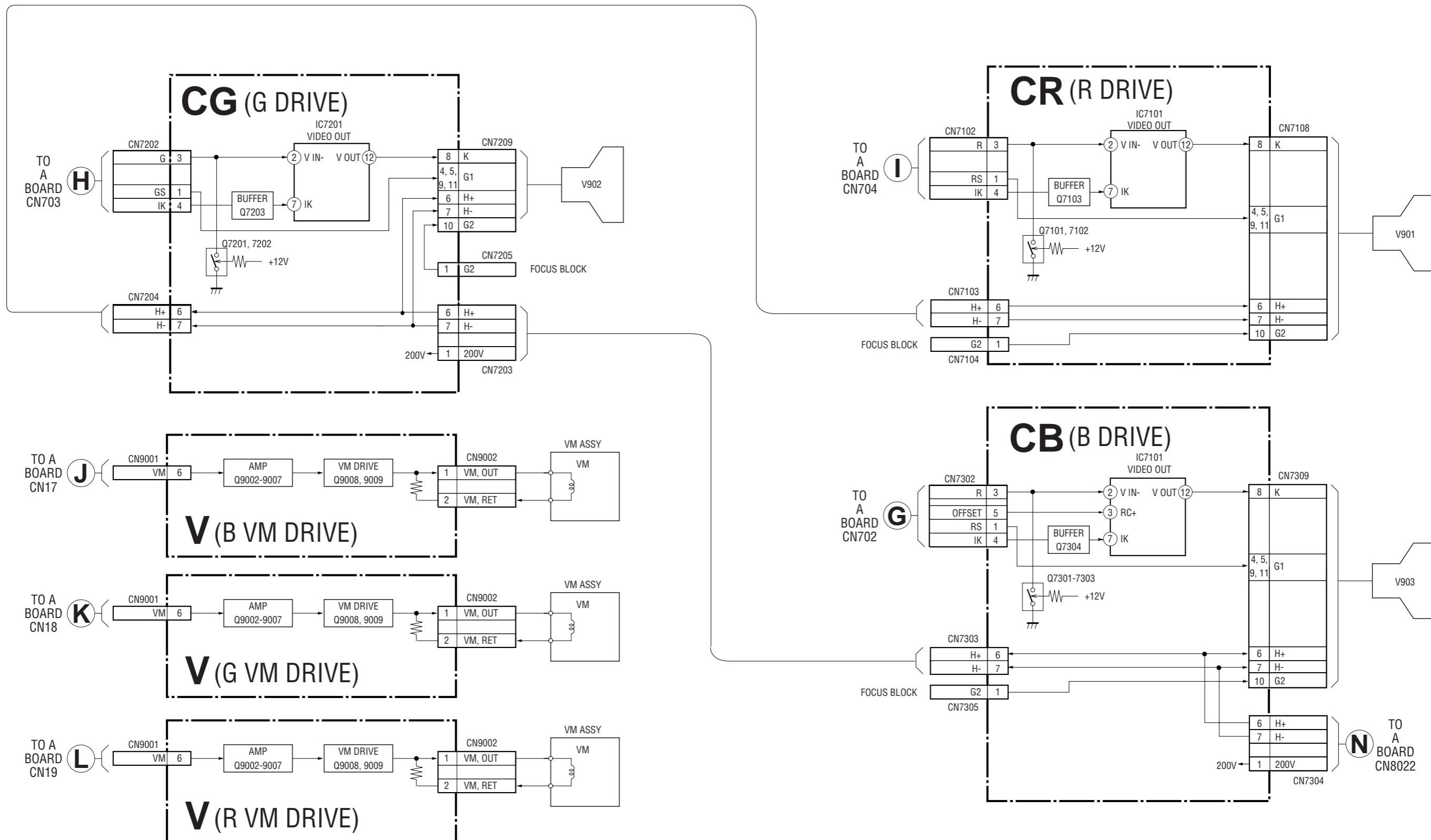
BLOCK DIAGRAM (8)



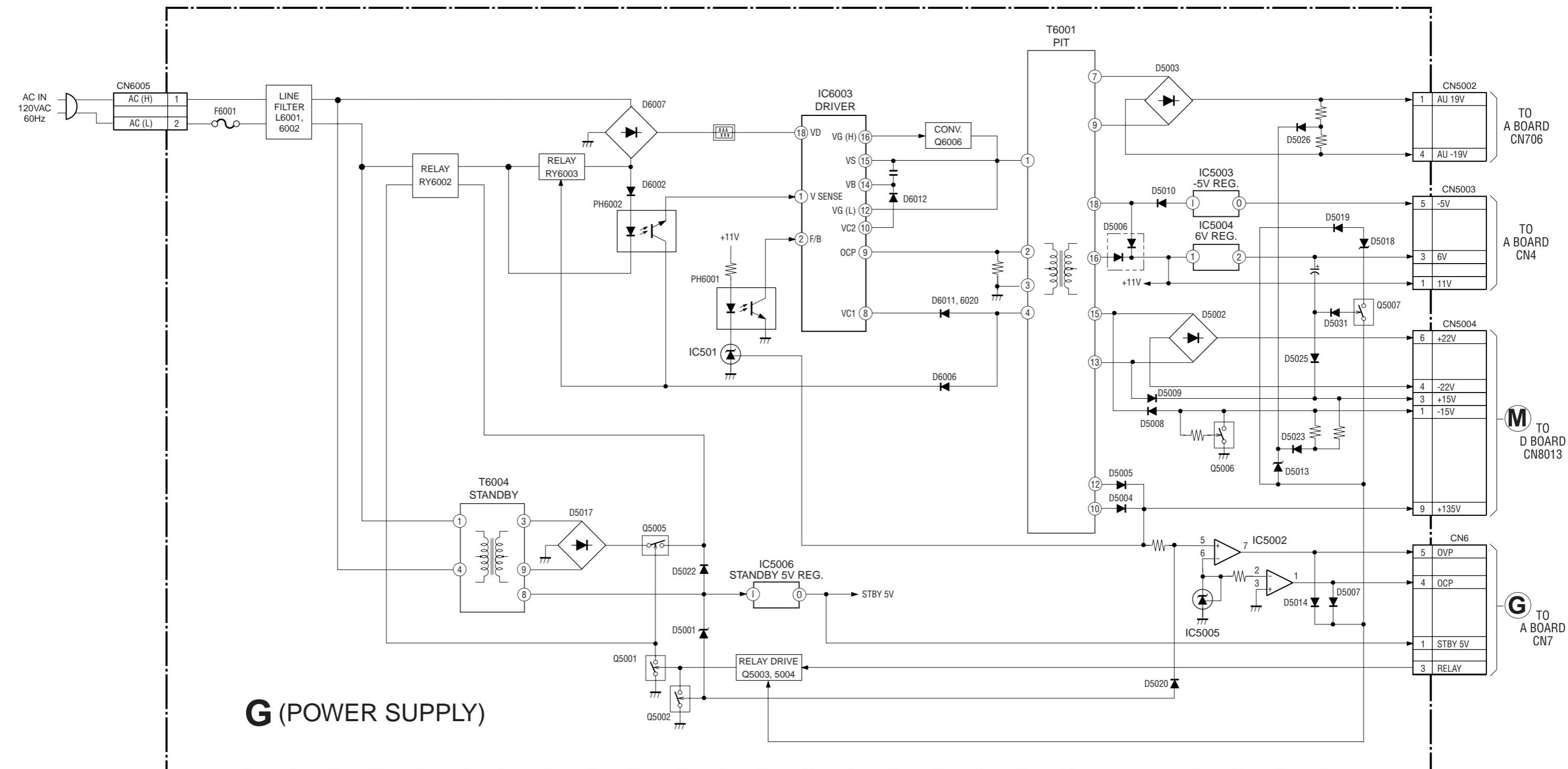
BLOCK DIAGRAM (9)



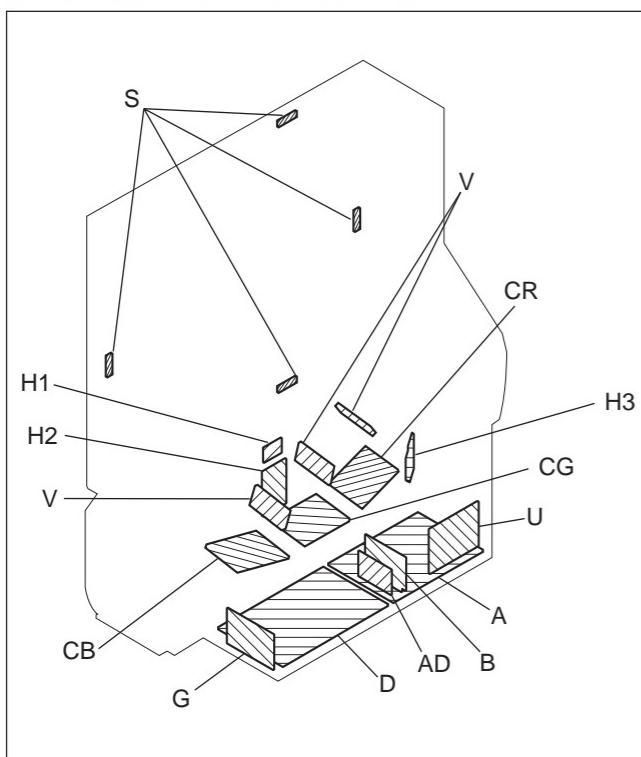
BLOCK DIAGRAM (10)



BLOCK DIAGRAM (11)



6-2. CIRCUIT BOARDS LOCATION



Note: The symbol  display is on the component side.
The components identified by shading and mark  are critical for safety. Replace only with part number specified.

The symbol  indicate fast operating fuse.
Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un tramé et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole  indique une fusible à action rapide.
Doit être remplacée par une fusible de même valeur, comme marqué.

6-3. SCHEMATIC DIAGRAMS

Note:
• Capacitors without voltage indication are all 50V.

• All resistors are in ohms.
kΩ=1000Ω, MΩ=1000kΩ

• Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : 1/4 W

•  : nonflammable resistor.

•  : fusible resistor.

•  : internal component.

•  : panel designation and adjustment for repair.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

•  : earth-chassis.

• The components identified by  in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

• When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by  and repeat the adjustment until the specified value is achieved.

(Refer to VR8001 and VR8002 adjustment on Page 33.)

• Readings are taken with a NTSC color-bar signal input.

• Readings are taken with a 10MΩ digital multimeter.

• Voltages are dc with respect to ground unless otherwise noted.

• Voltage variations may be noted due to normal production tolerances.

• All voltages are in V.

* : Measurement impossibility.

- Circled numbers are waveform references.

-  : B+ bus.

-  : B- bus.

-  : signal path.(RF)

Reference information

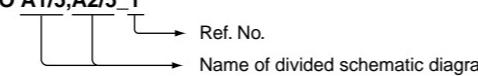
RESISTOR	: RN METAL FILM
	: RC SOLID
	: FPRD NONFLAMMABLE CARBON
	: FUSE NONFLAMMABLE FUSIBLE
	: RW NONFLAMMABLE WIREWOUND
	: RS NONFLAMMABLE METAL OXIDE
	: RB NONFLAMMABLE CEMENT
	: ✕ ADJUSTMENT RESISTOR
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM
	: PS STYROL
	: PP POLYPROPYLENE
	: PT MYLAR
	: MPS METALIZED POLYESTER
	: MPP METALIZED POLYPROPYLENE
	: ALB BIPOLAR
	: ALT HIGH TEMPERATURE
	: ALR HIGH RIPPLE

- Divided schematic diagram

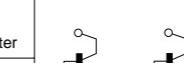
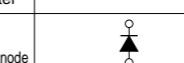
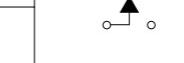
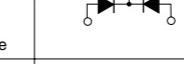
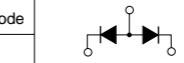
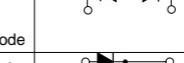
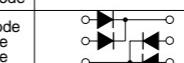
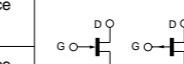
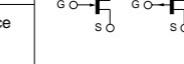
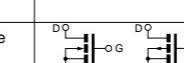
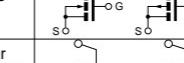
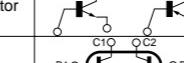
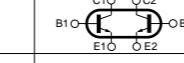
Schematic diagrams of A, AD, B, D, G, and U boards are divided into several pieces. Information to where the line is to be connected is printed at the end of each.

For example, [TO A1/5,A2/5_1] means the line is connected to Ref. No. 1 of A(1/5) and A(2/5) schematic diagrams.

TO A1/5,A2/5_1

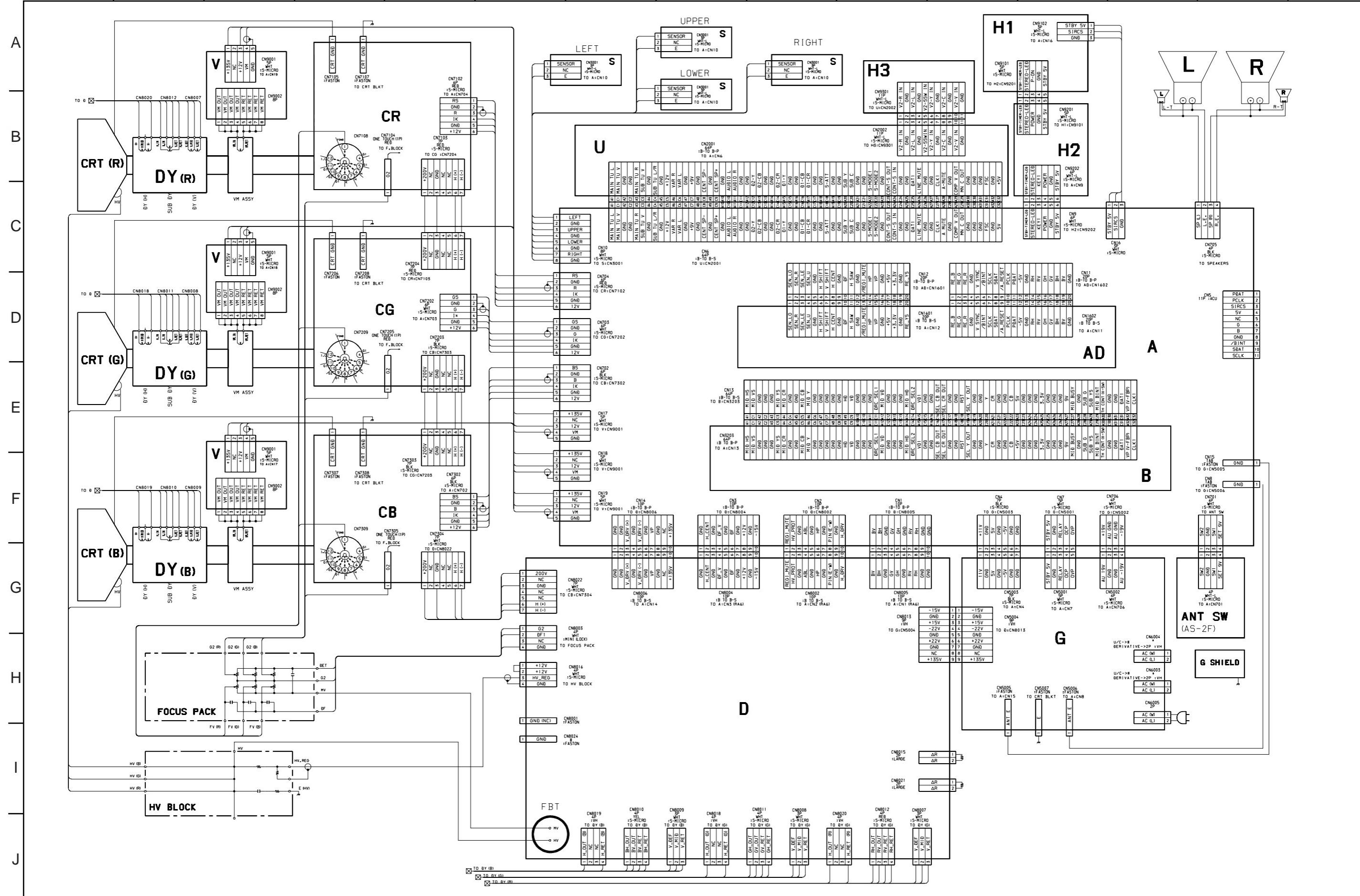


Terminal name of semiconductors in silk screen printed circuit (*)

Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Anode Cathode Cathode	
⑬ Transistor (FET)		Drain Source Gate	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Collector Base	
⑰ Transistor		C2(B1E1) E2(B2C1)	
⑱ Transistor		C1(B2E2) E1(B1C2)	
⑲ Transistor		C1 B2 E2 E1 B1 C2	
⑳ Transistor		C1 B2 E2 E1 B1 C2	
㉑ Transistor		E2 B1 E1 C2 C1(B2)	
㉒ Transistor		B1 E1 E2 C1 C2	
㉓ Transistor		E2 E1 B1 C2 C1	
— Discrete semiconductor			

(Chip semiconductors that are not actually used are included.)

Ver.1.5



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A

A (1/9)(TUNER, AREG
I/V CONVERTER)

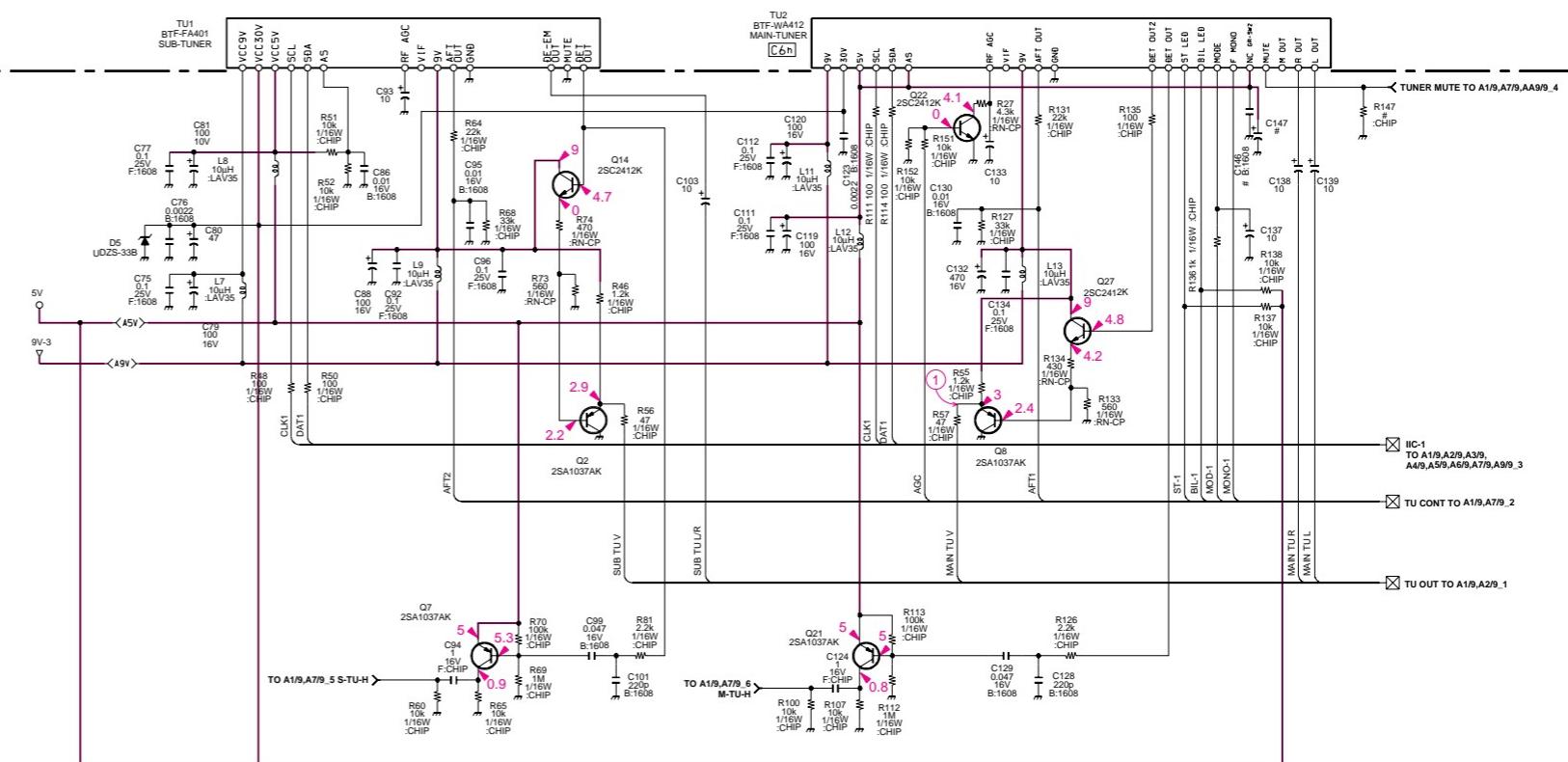
TO G BOARD CN5003

TO B BOARD CN8006

TO B BOARD CN8004

TO B BOARD CN8002

TO B BOARD CN8005



GND H_CENT GND DF_V GND GND +15V GND -15V

REGI_MUTE HV_PROT GND ABL GND HP GND +15V GND -15V

REGI_MUTE HV_PROT GND ABL TO A19, A59, 51 PIN(E-W) TO A19, A59, 52 H_DRIVE TO A19, A59, 53

BV BH GND GV GH GND RV RH GND BV

TO A19,A59_54 VM

TO V BOARD CN9001 TO V BOARD CN9001 TO S BOARD CN9001

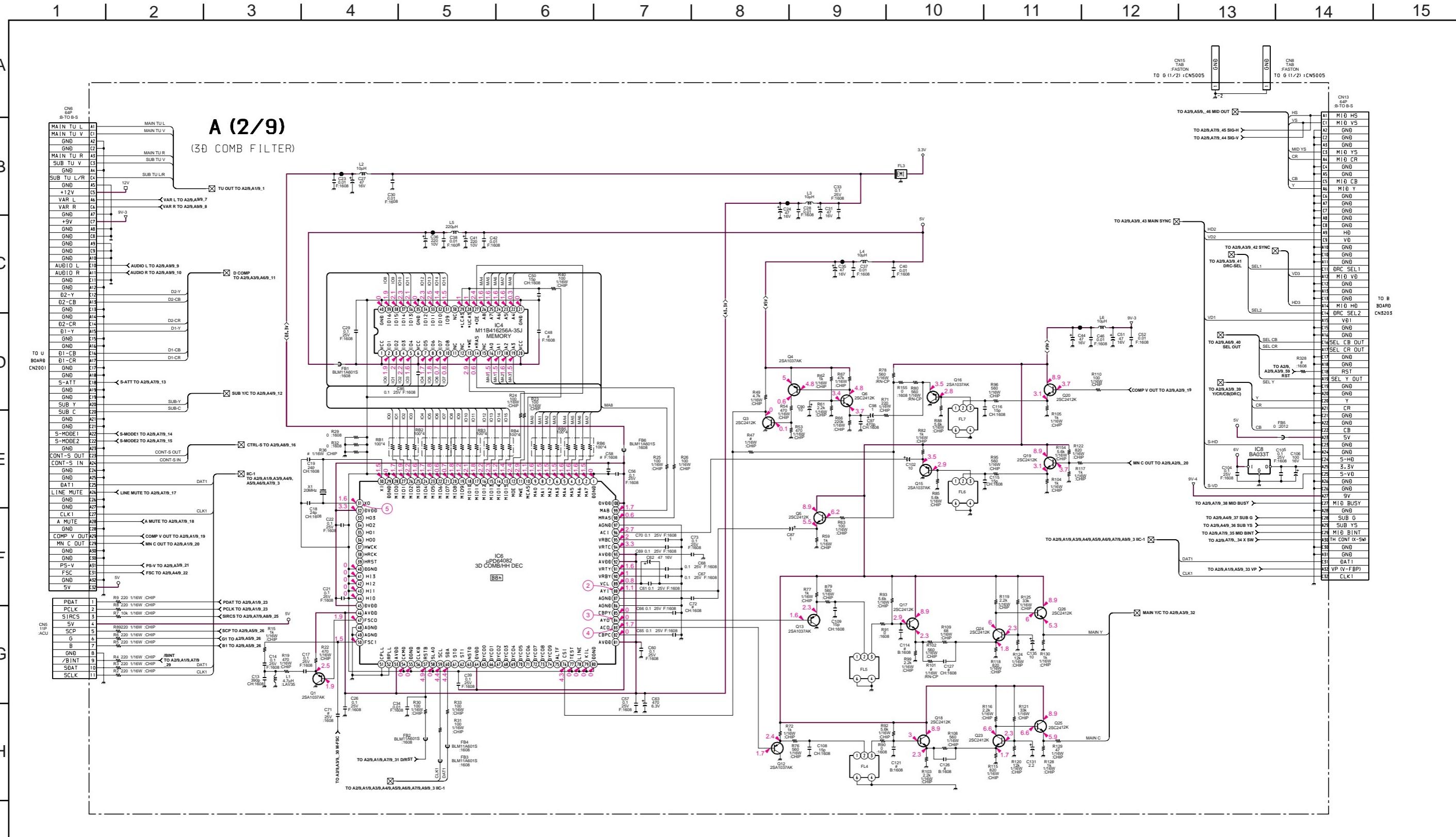
TO S:CN3001

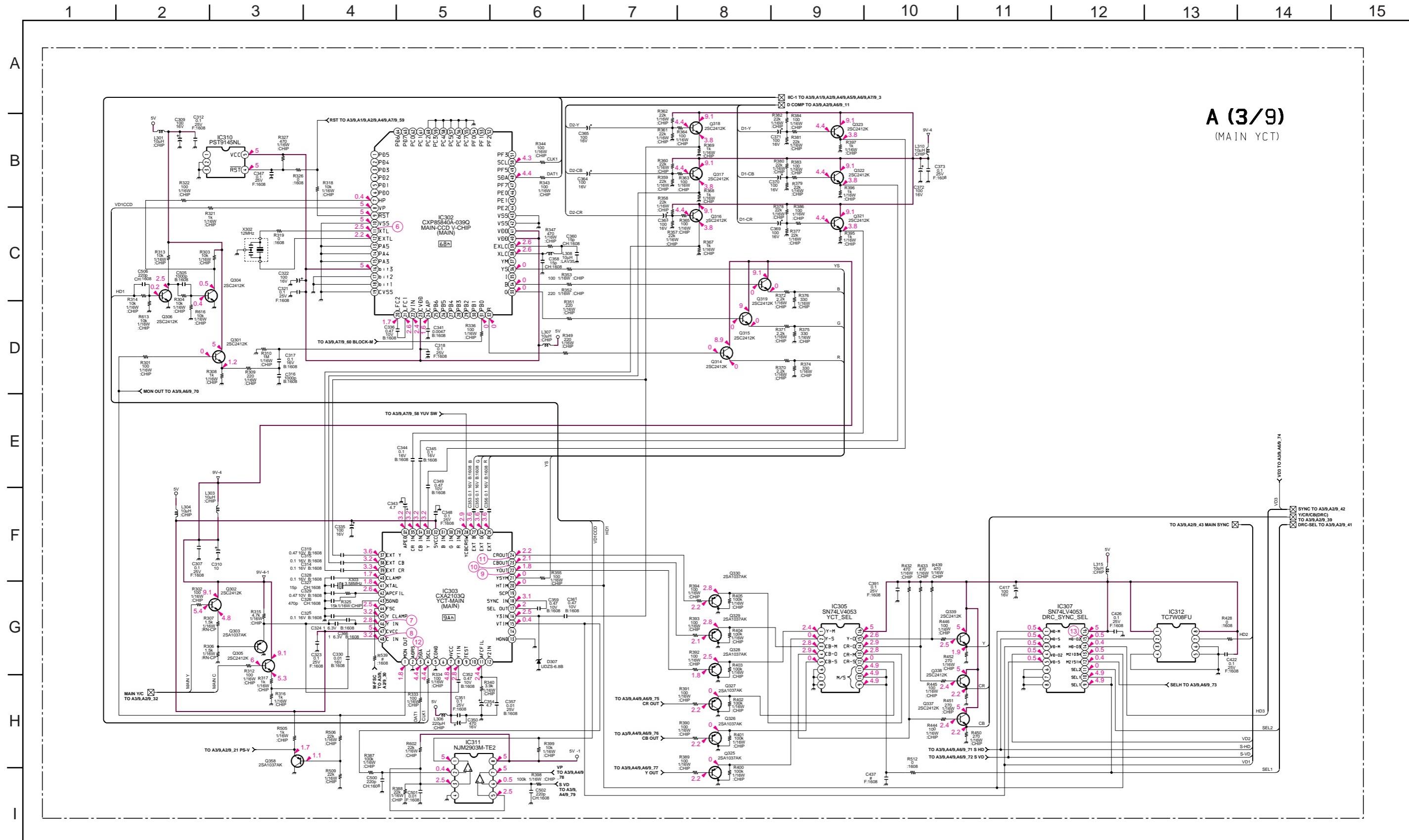
TO V BOARD CN9001

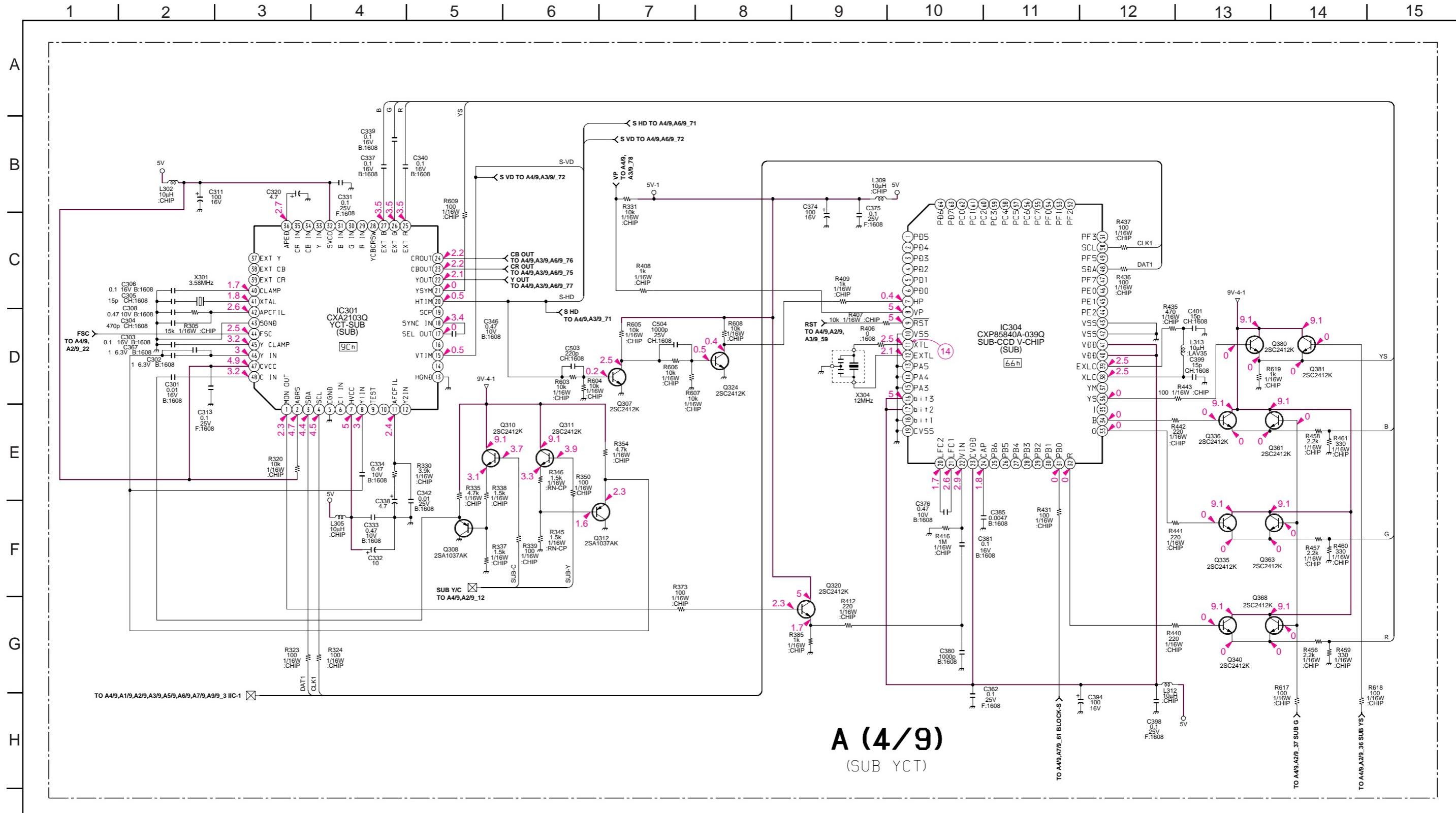
TO V BOARD CN9001

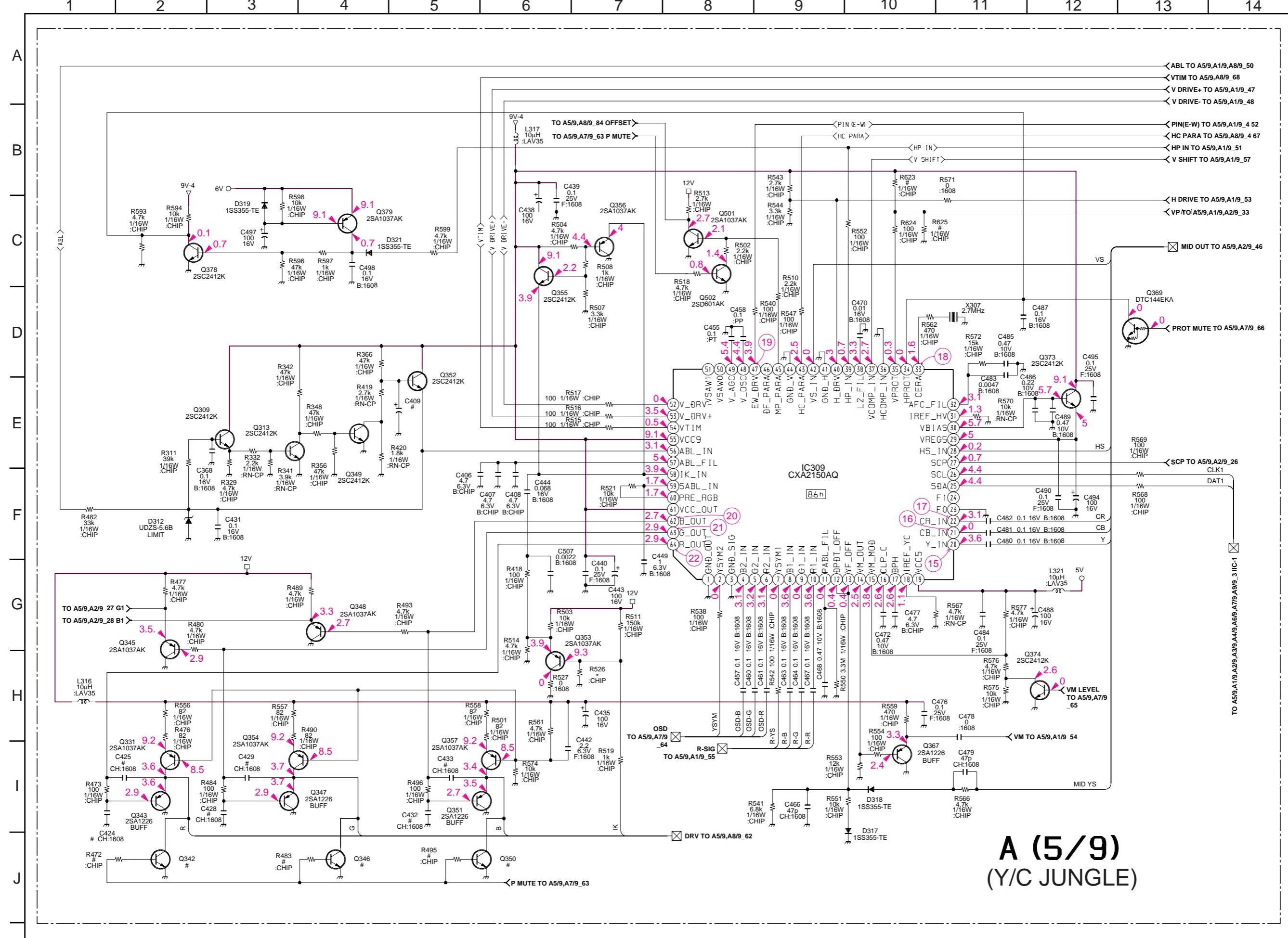
TO S:CN3001

TO V BOARD CN9001





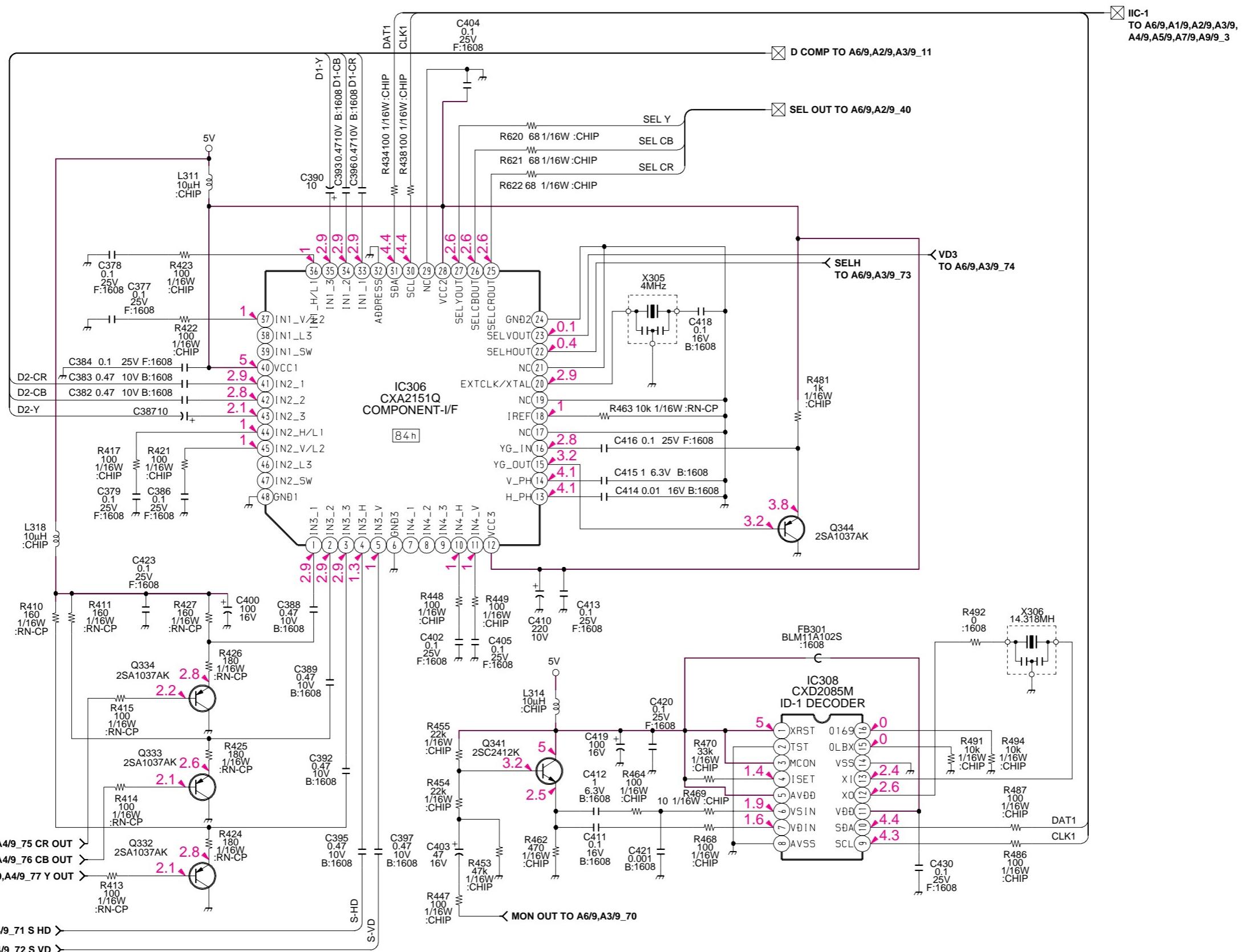


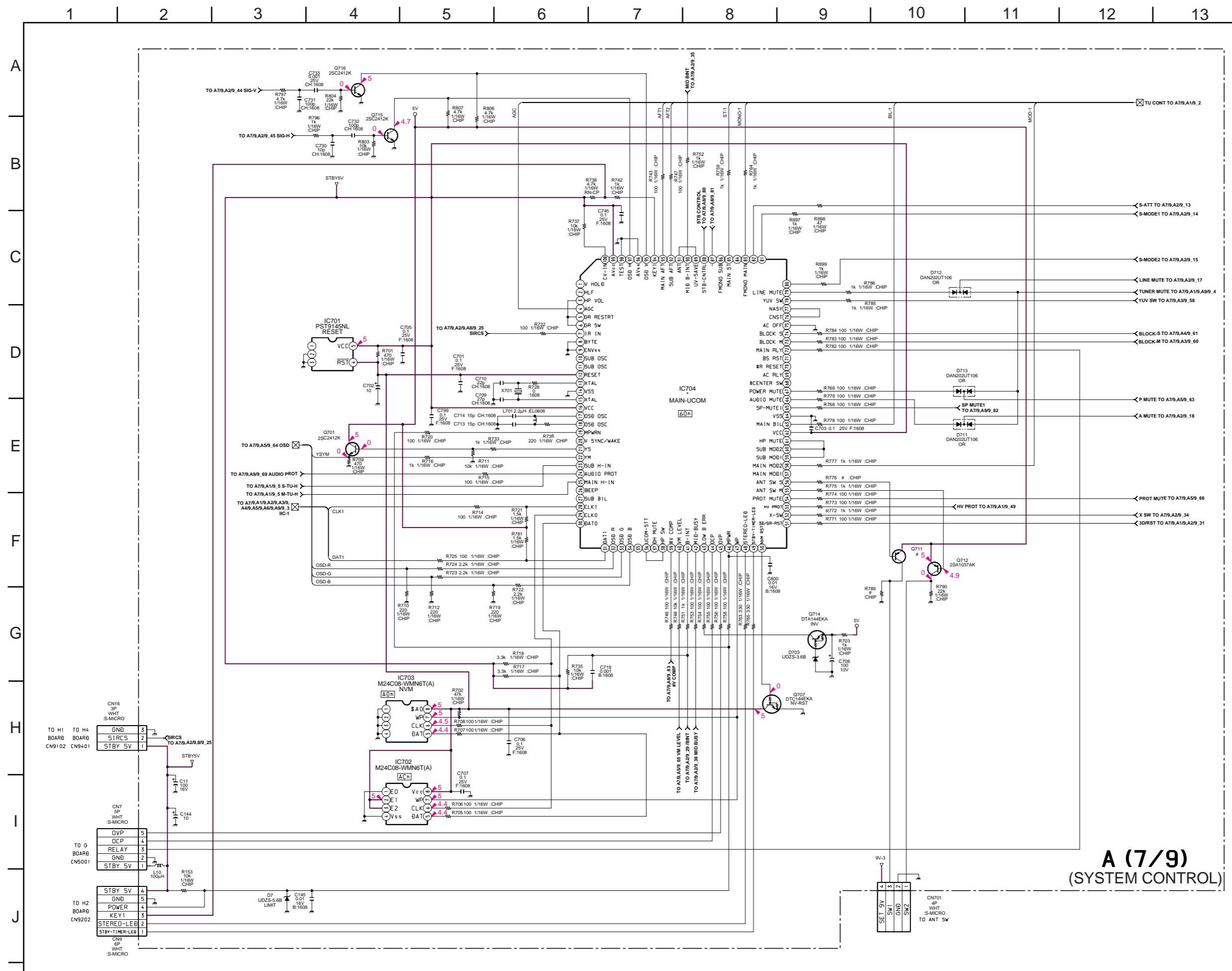


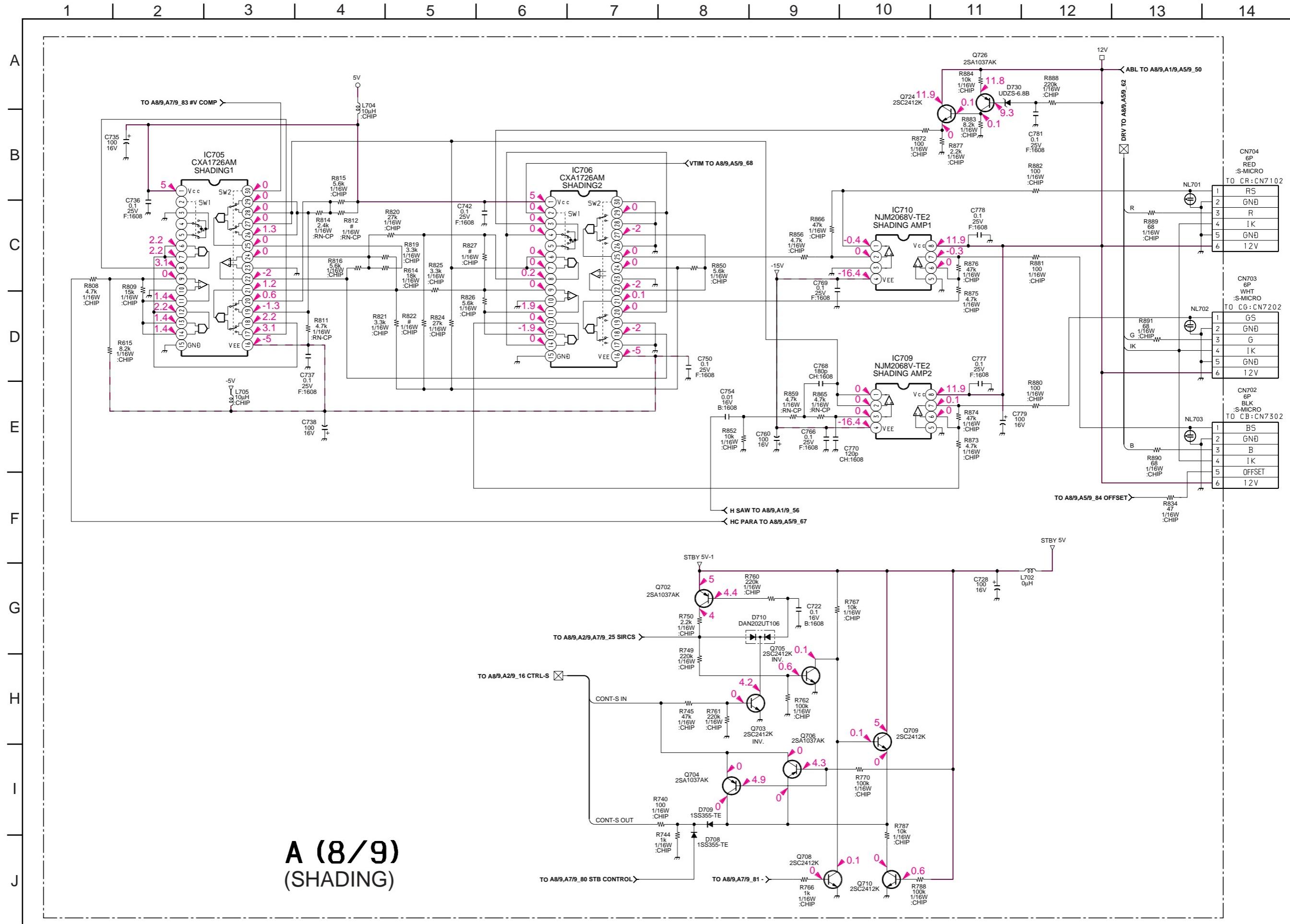
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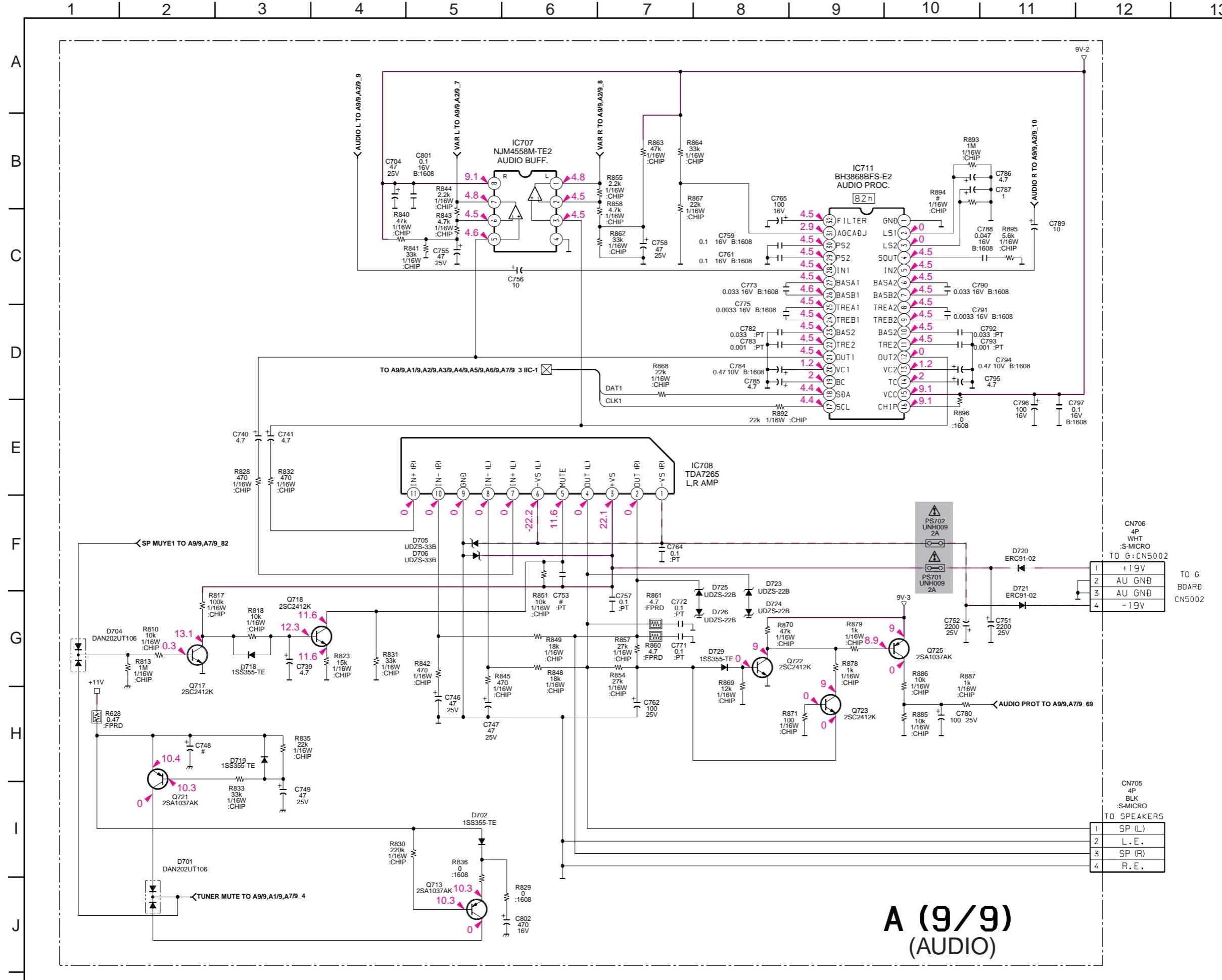
A (6/9)

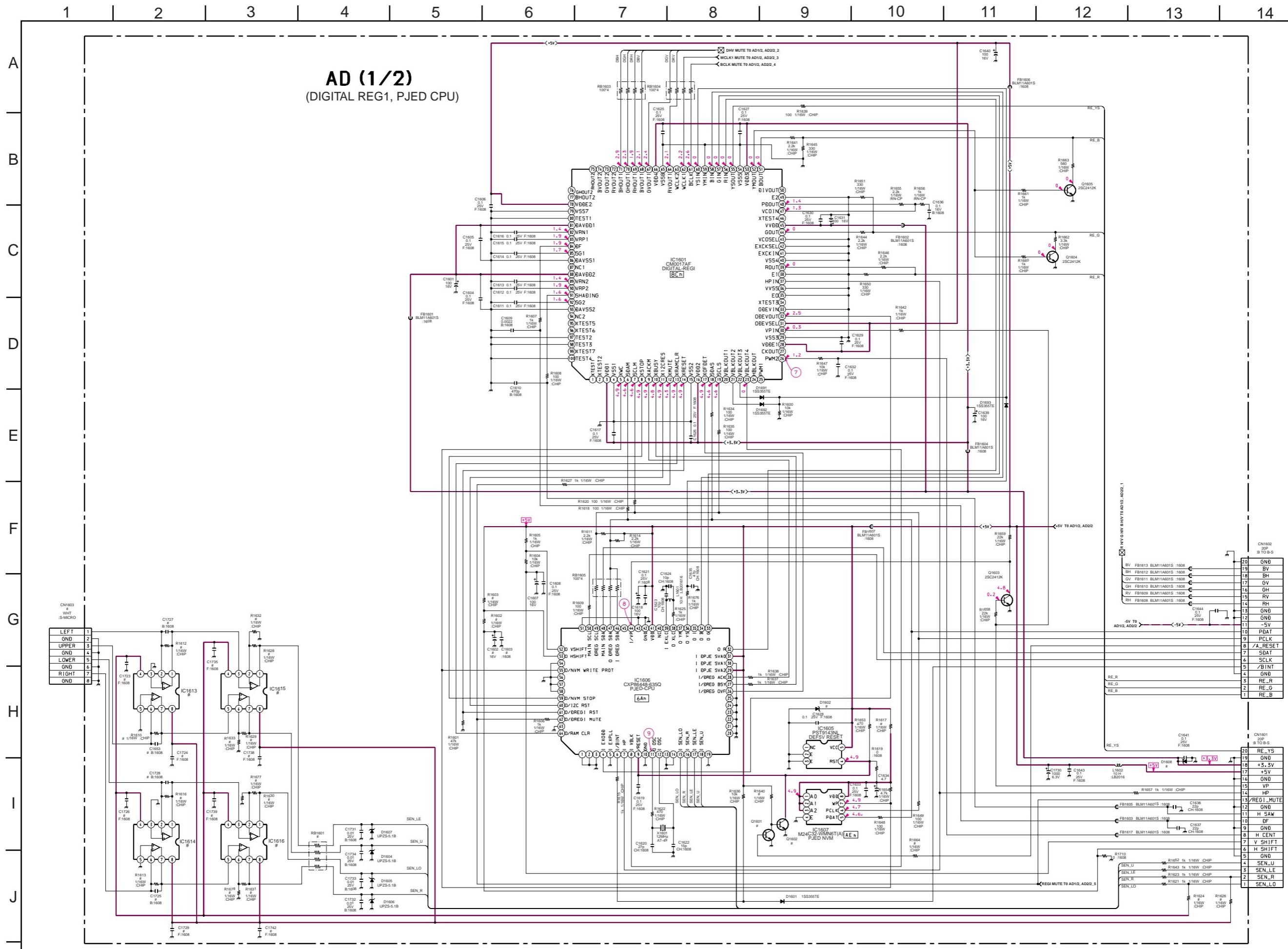
(COMPONENT I/F, ID-1 DECODER)

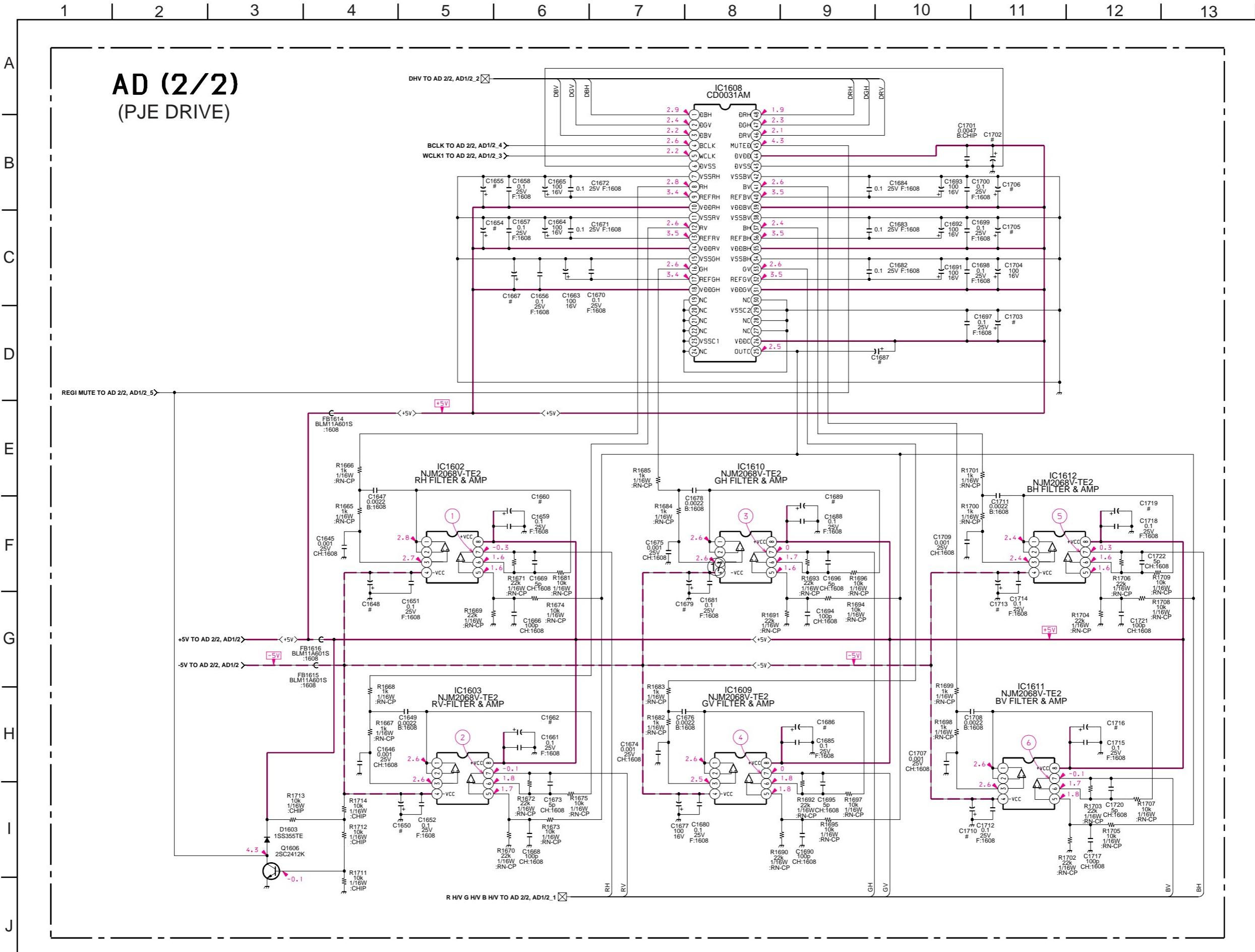


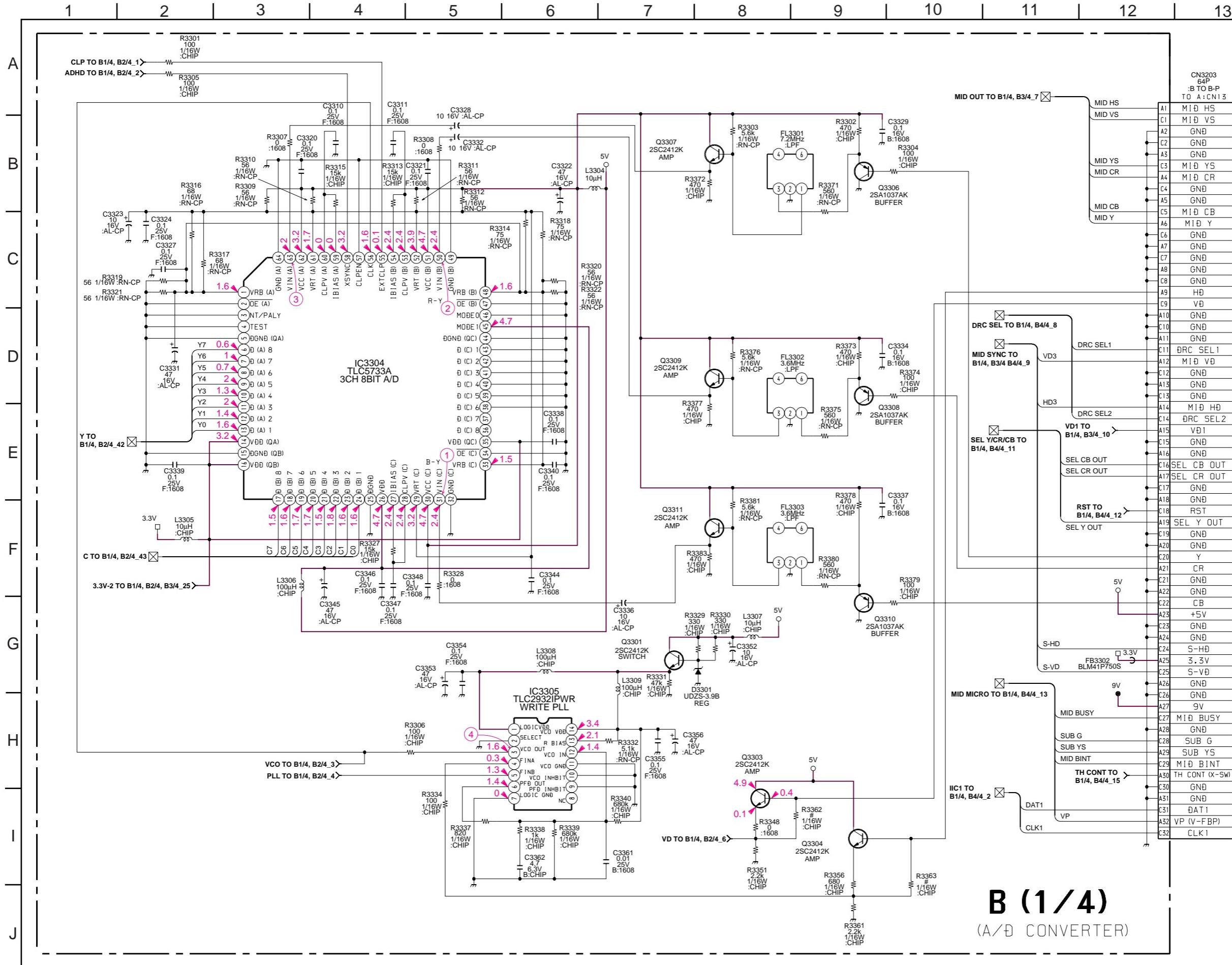


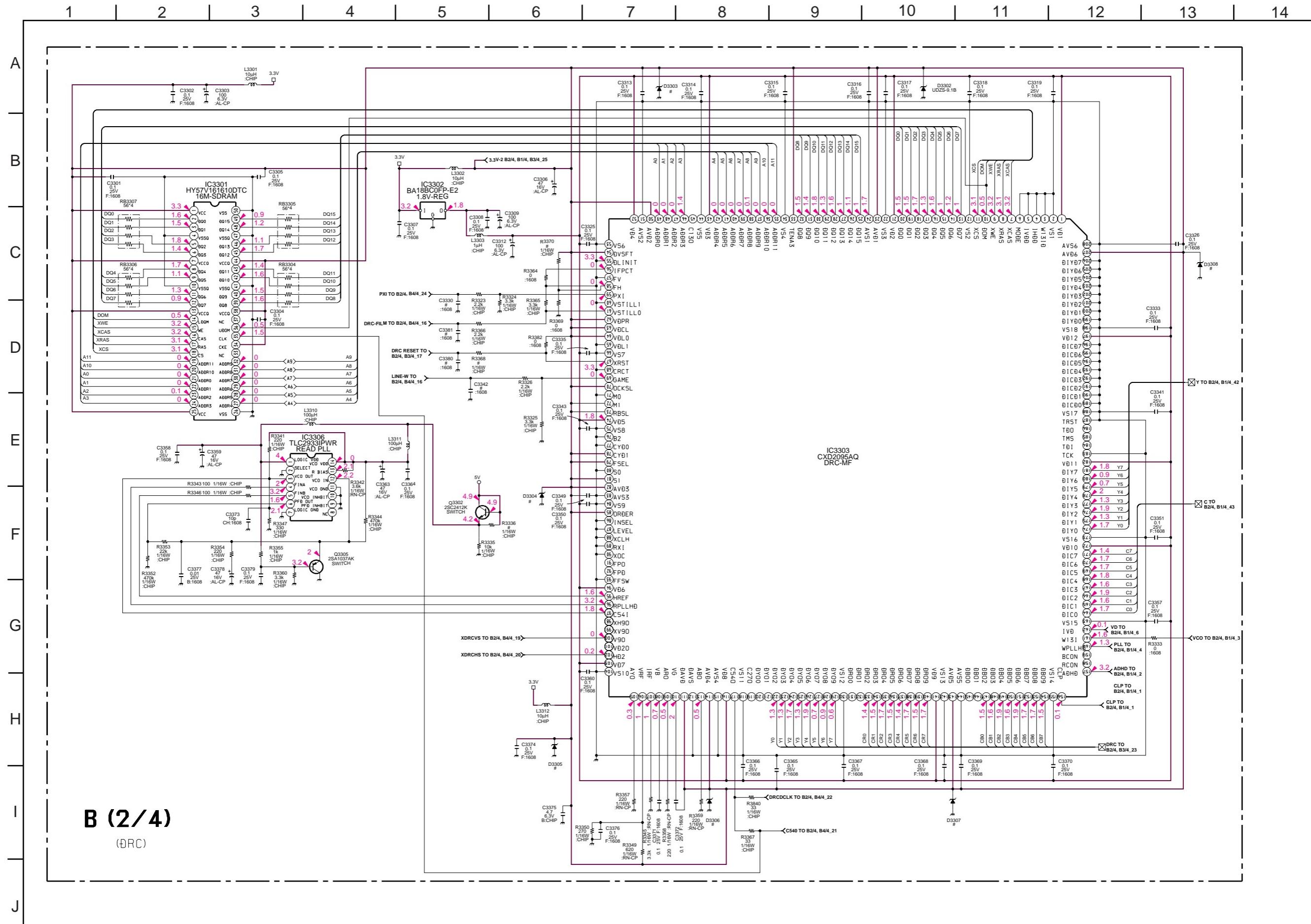


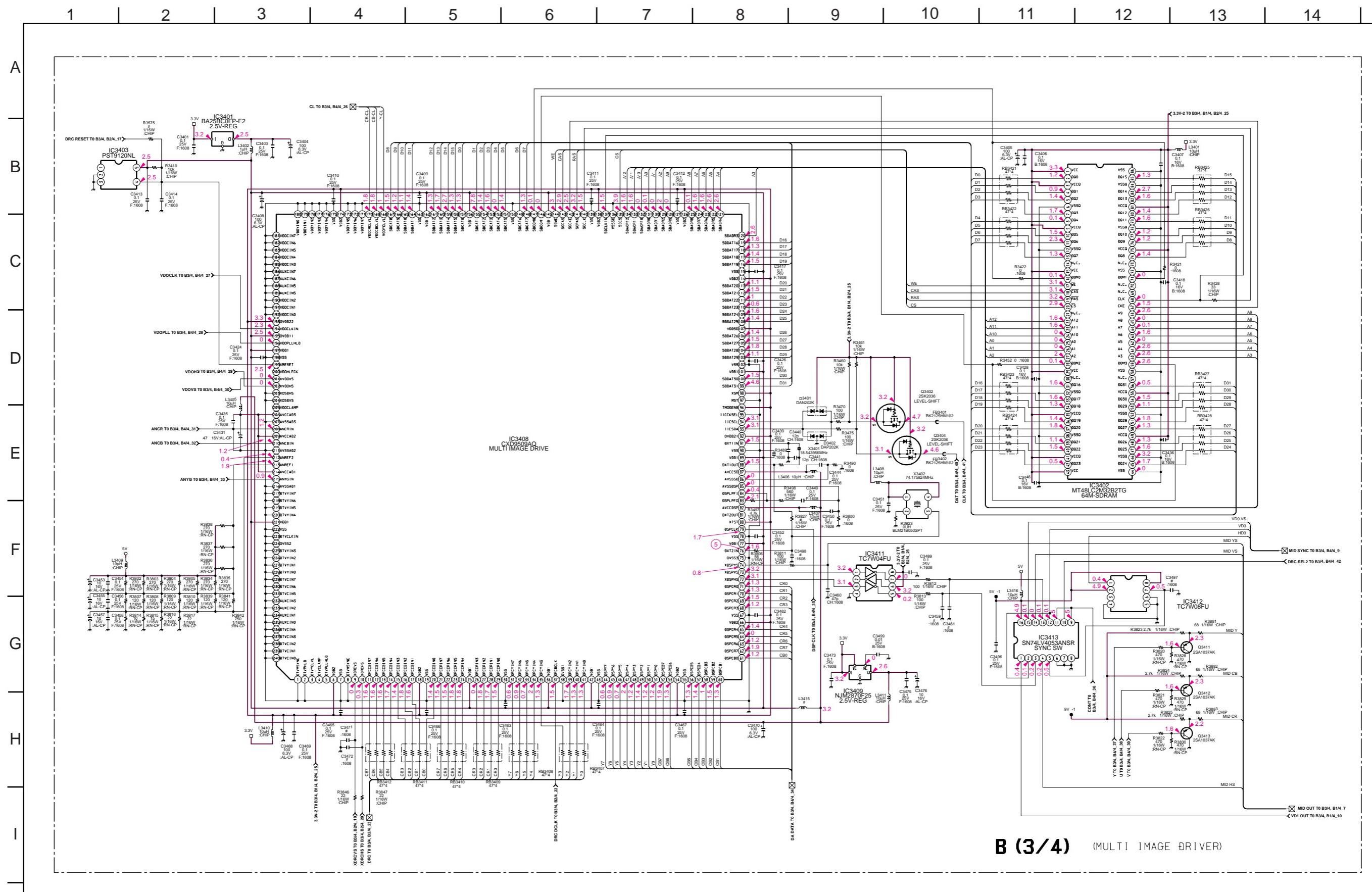




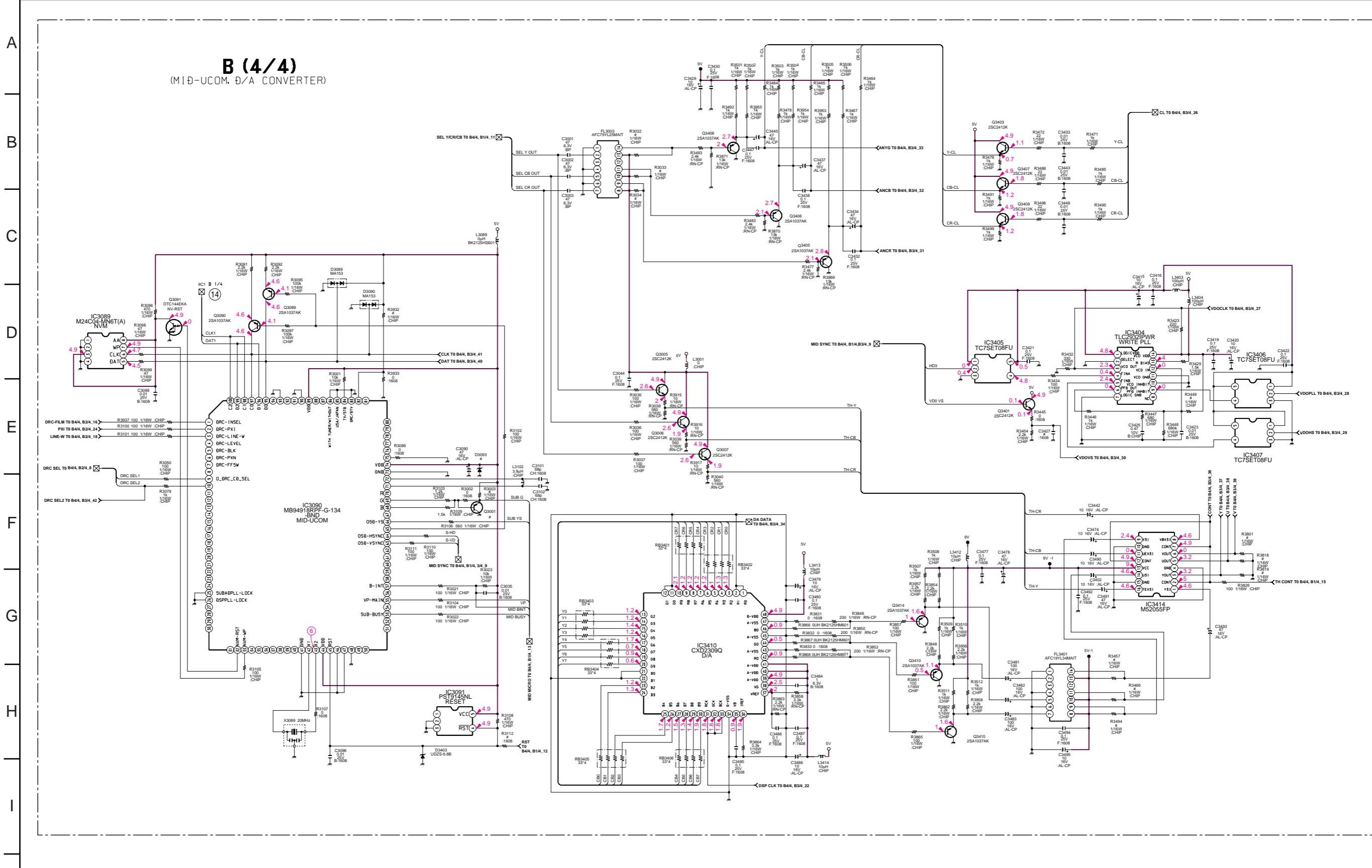


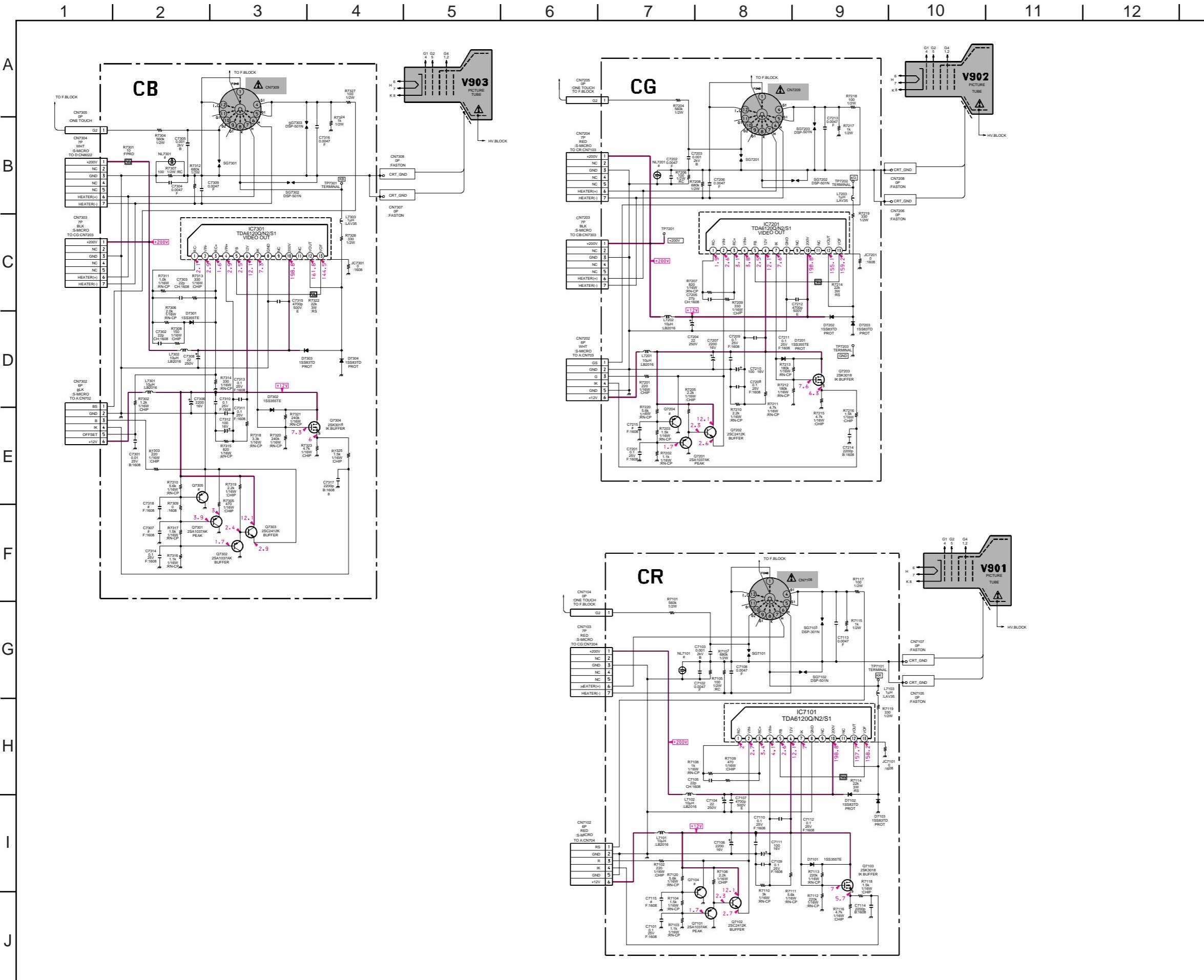


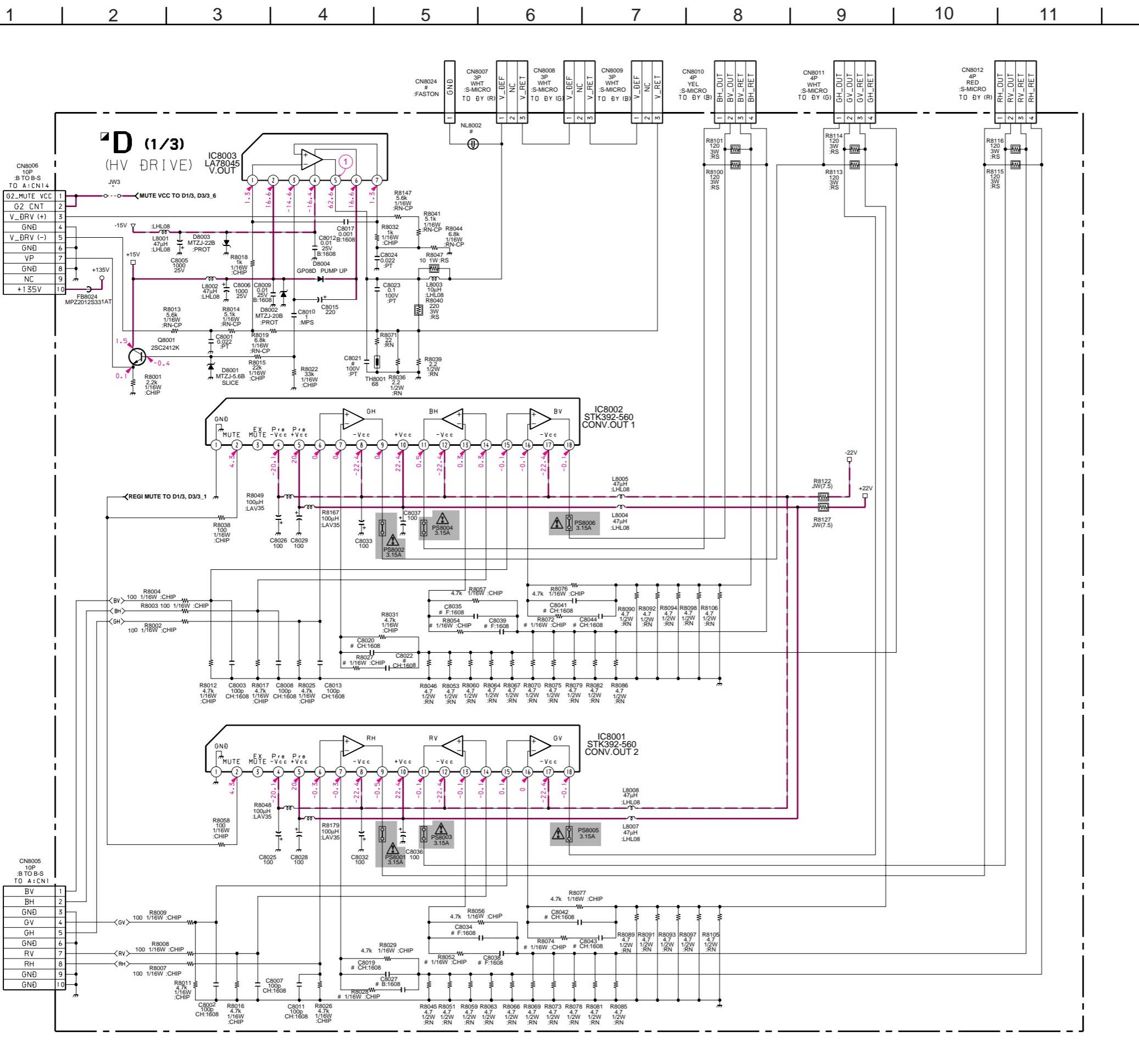


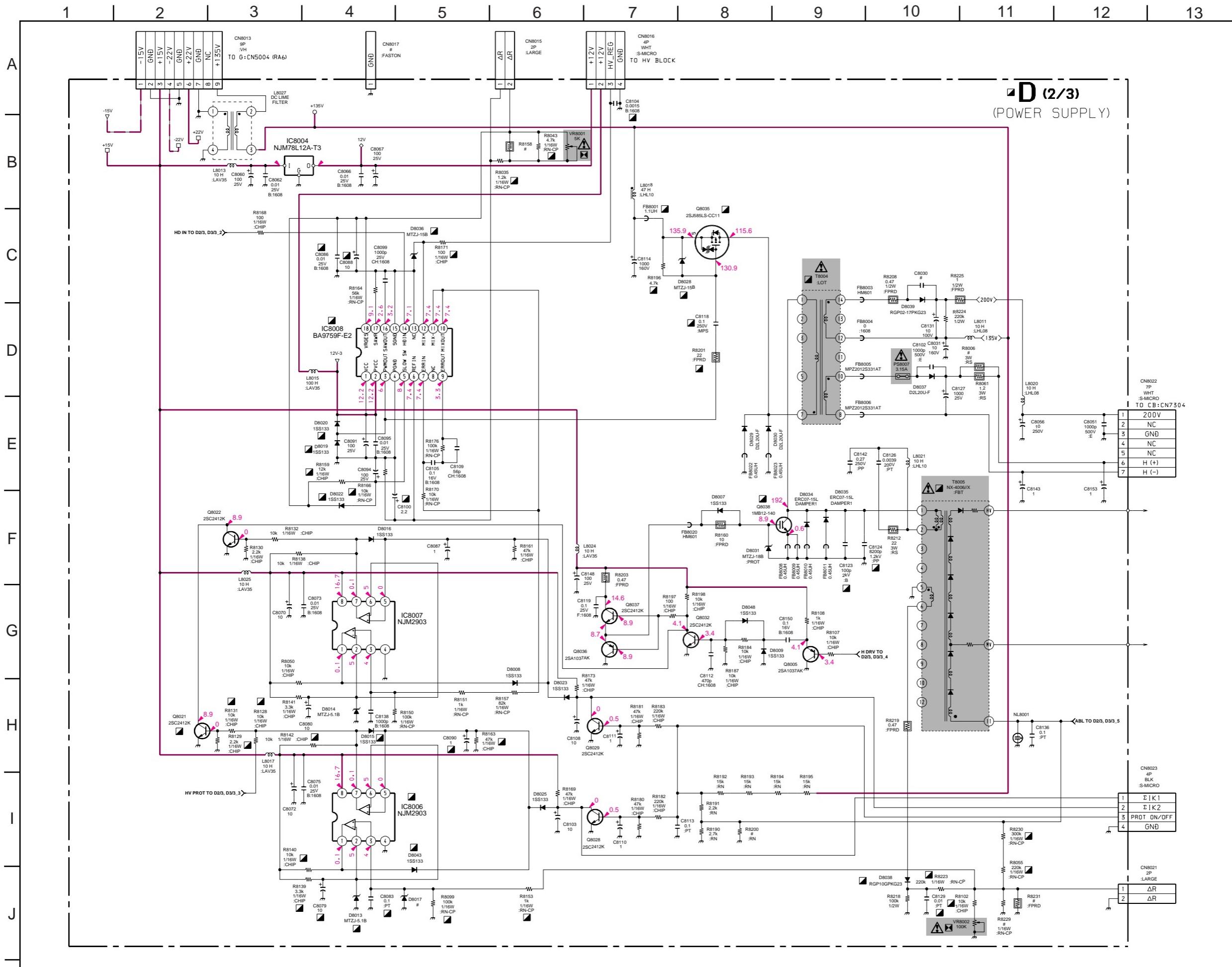


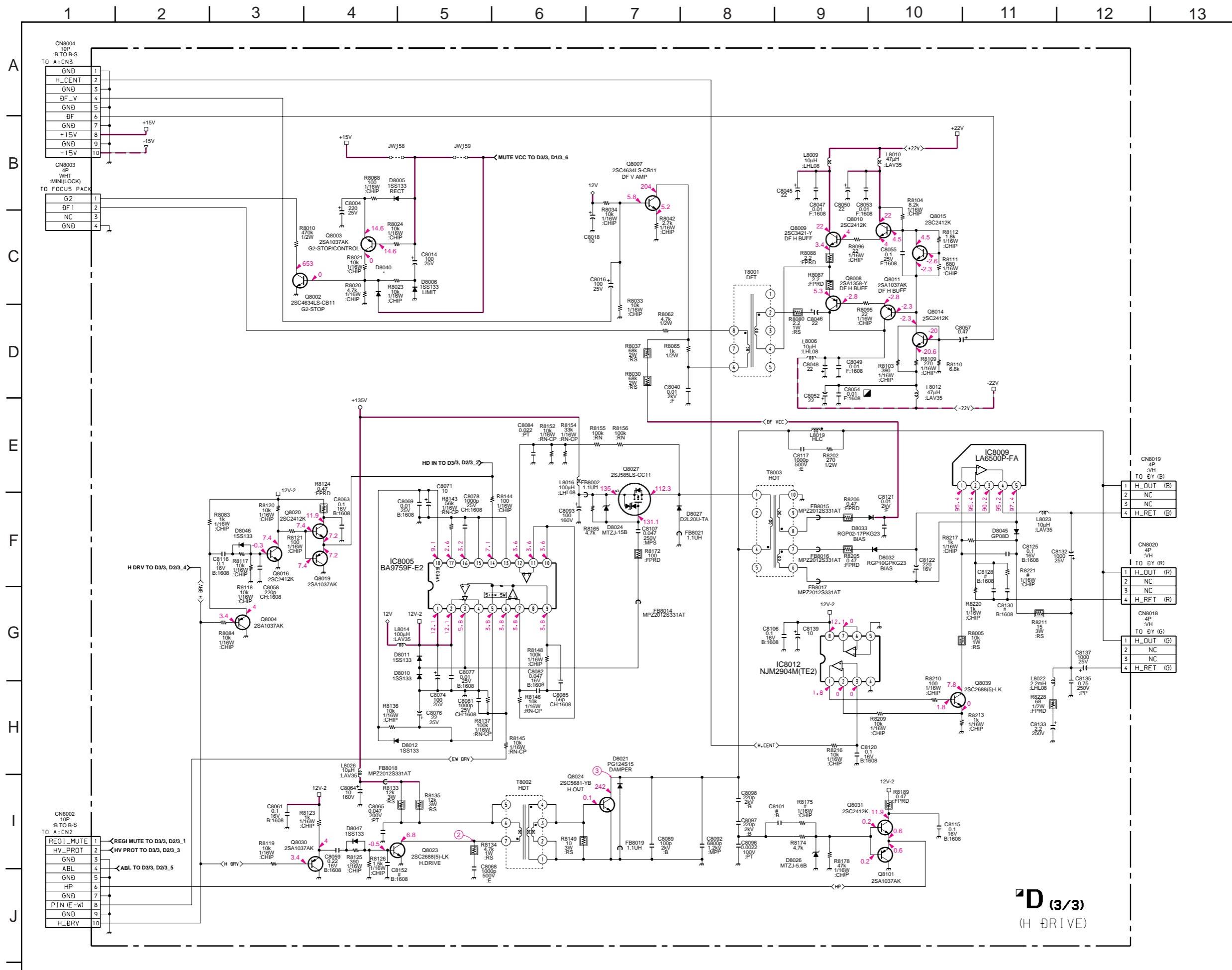
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14

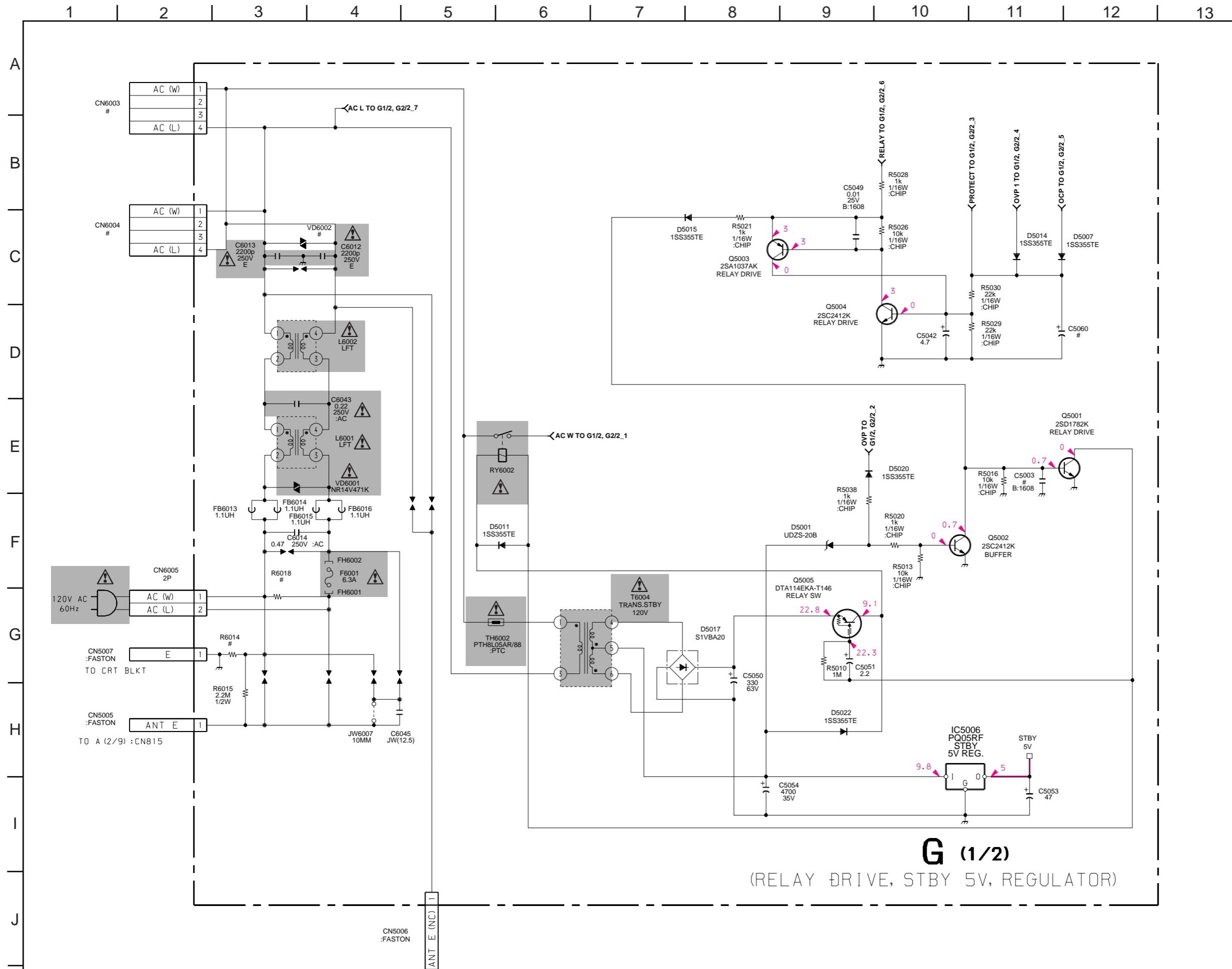


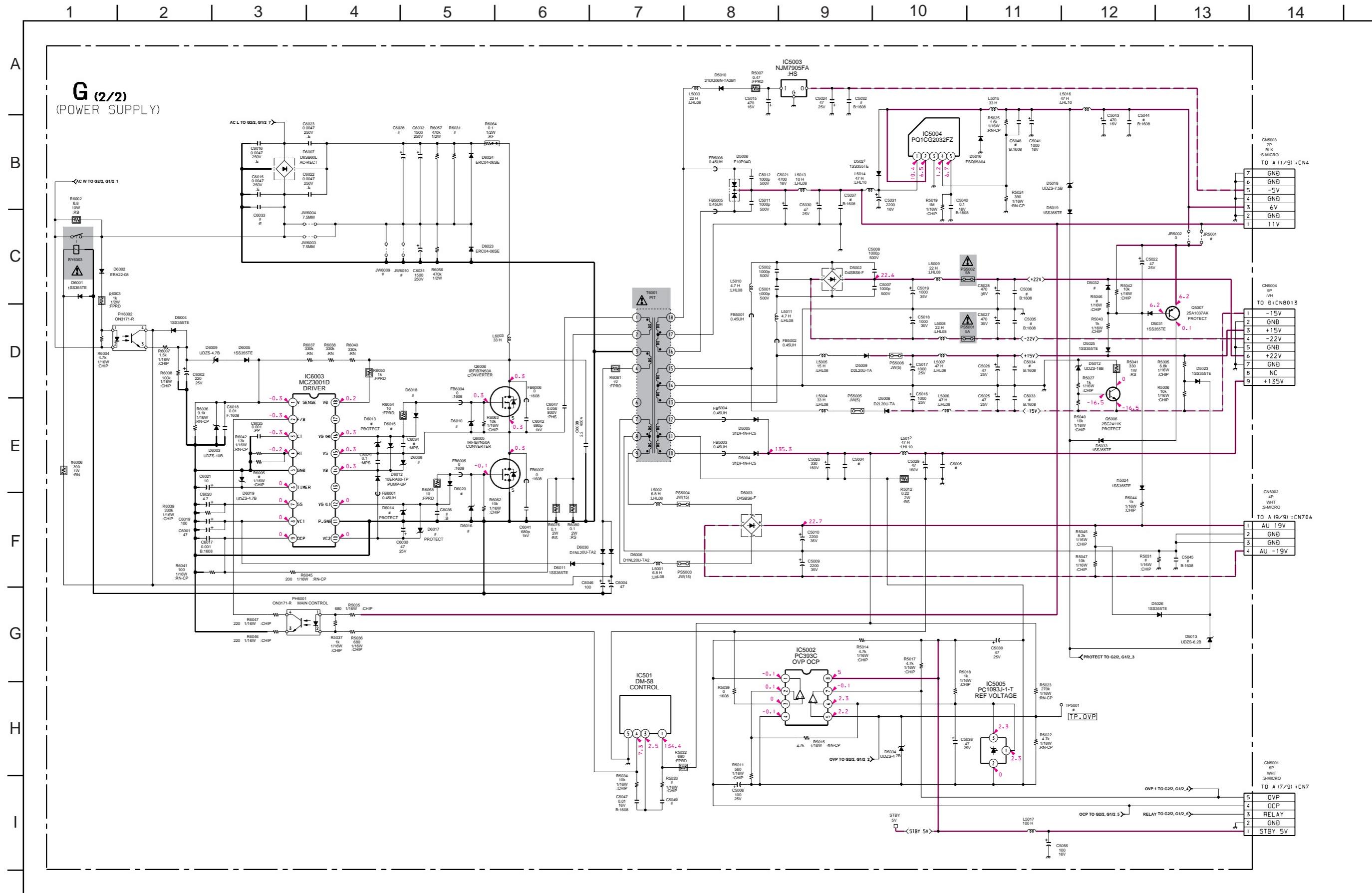


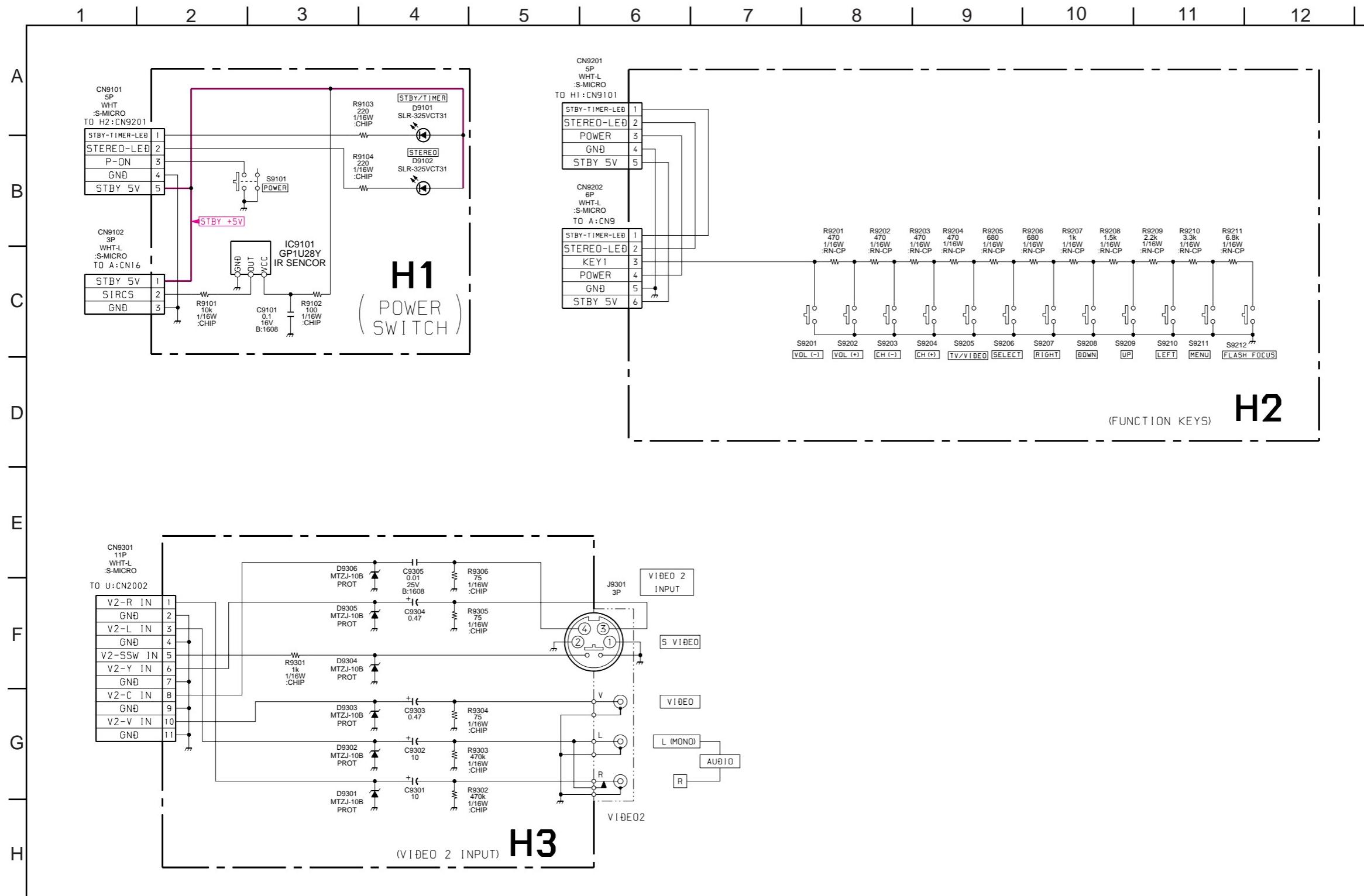


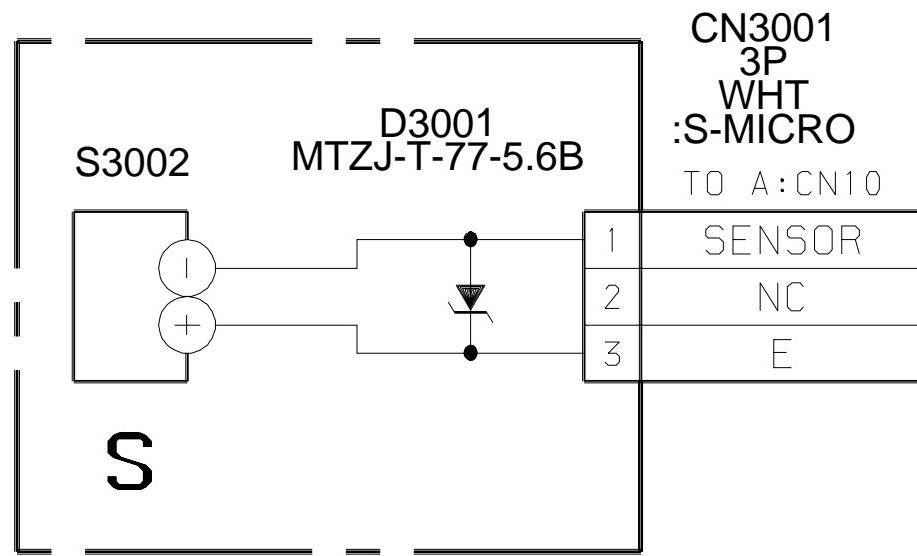


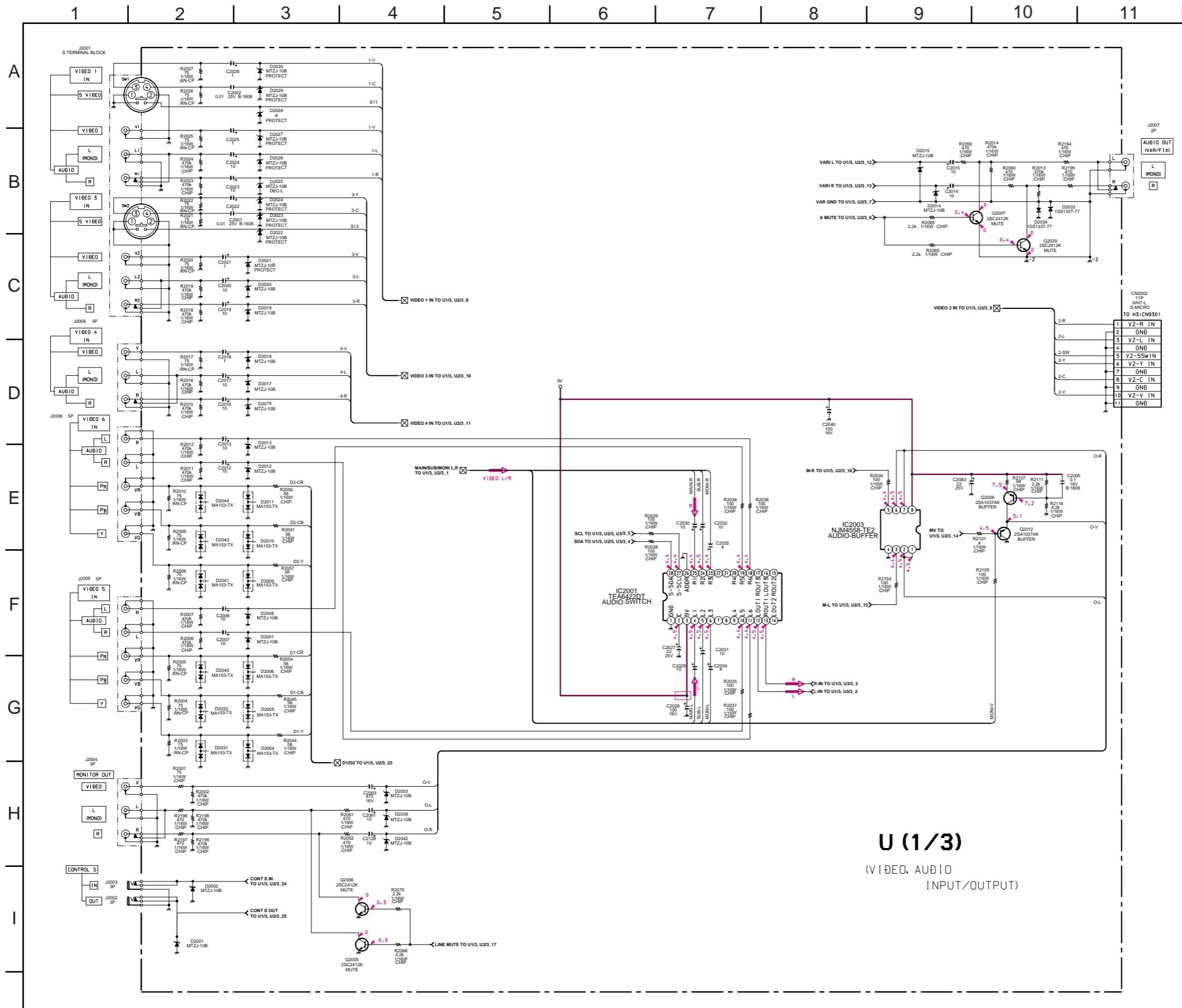


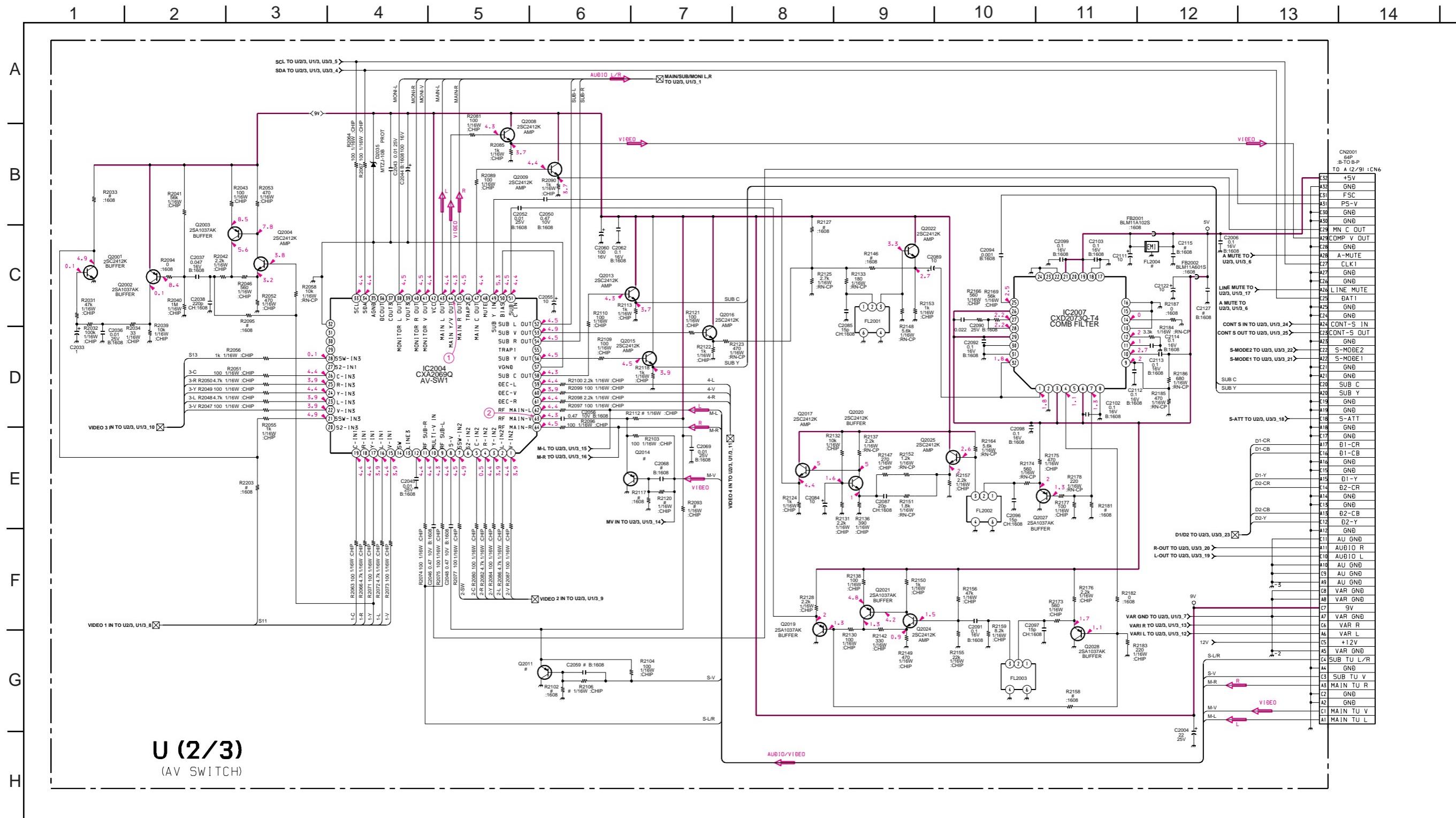


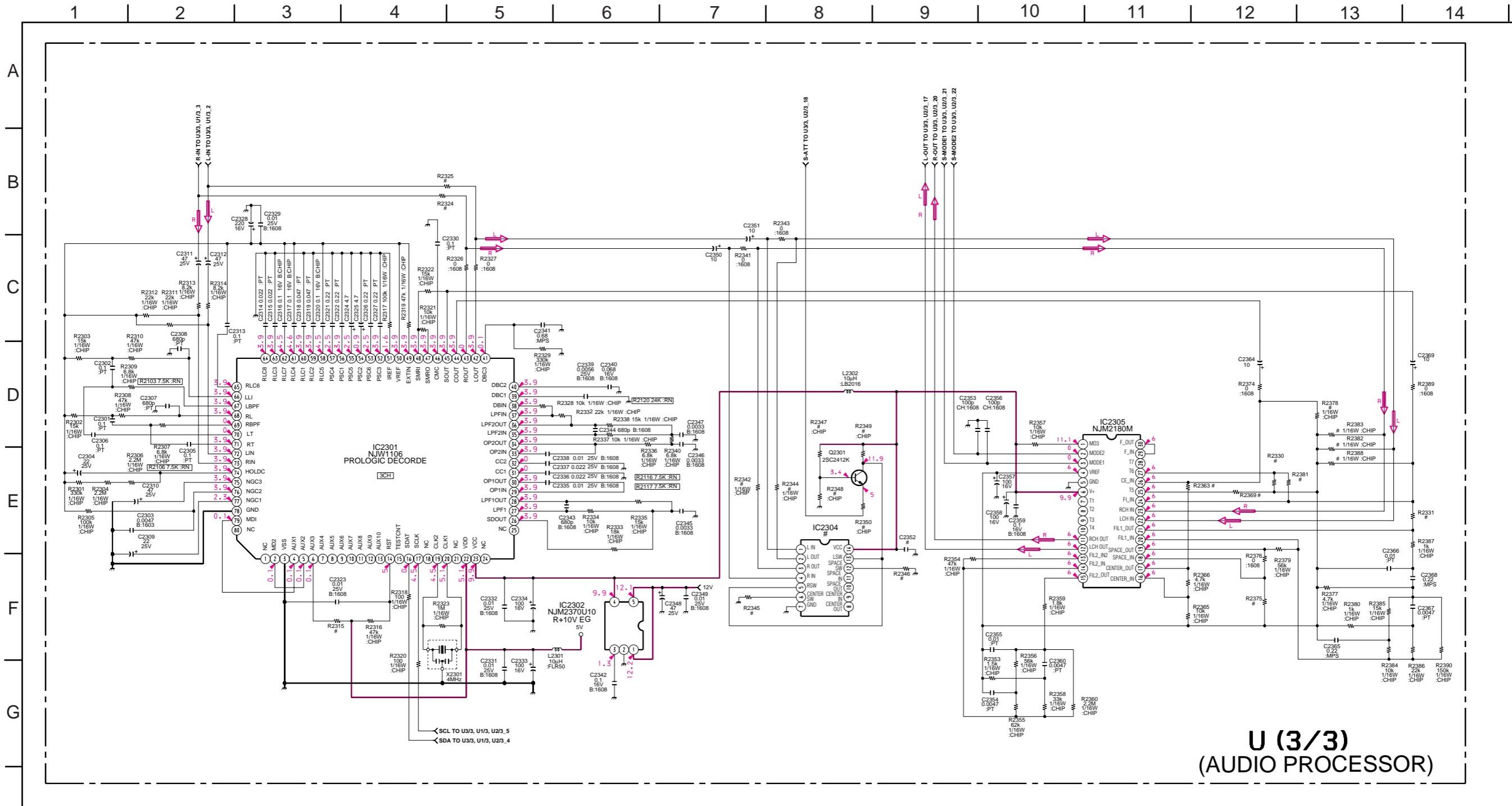


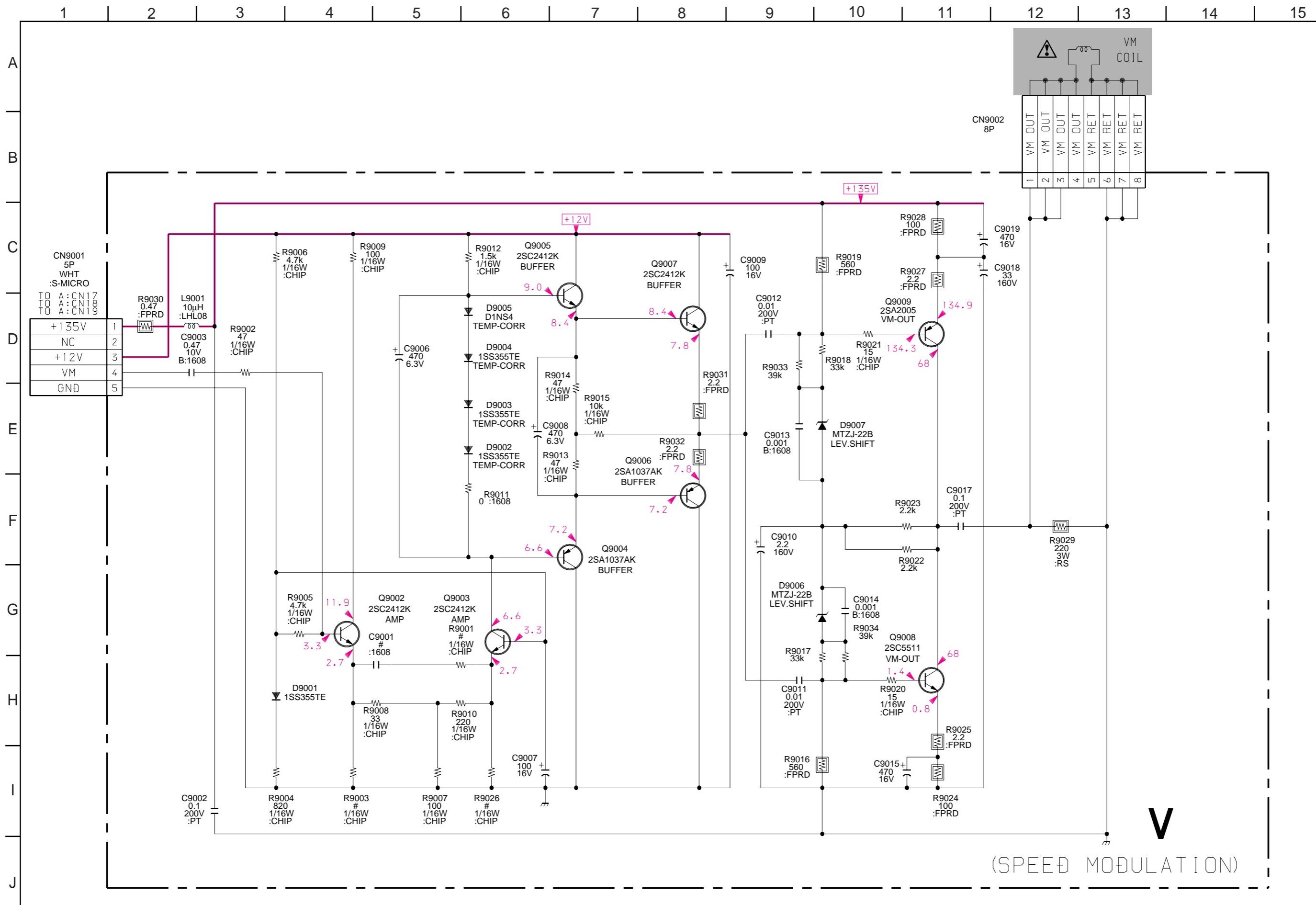












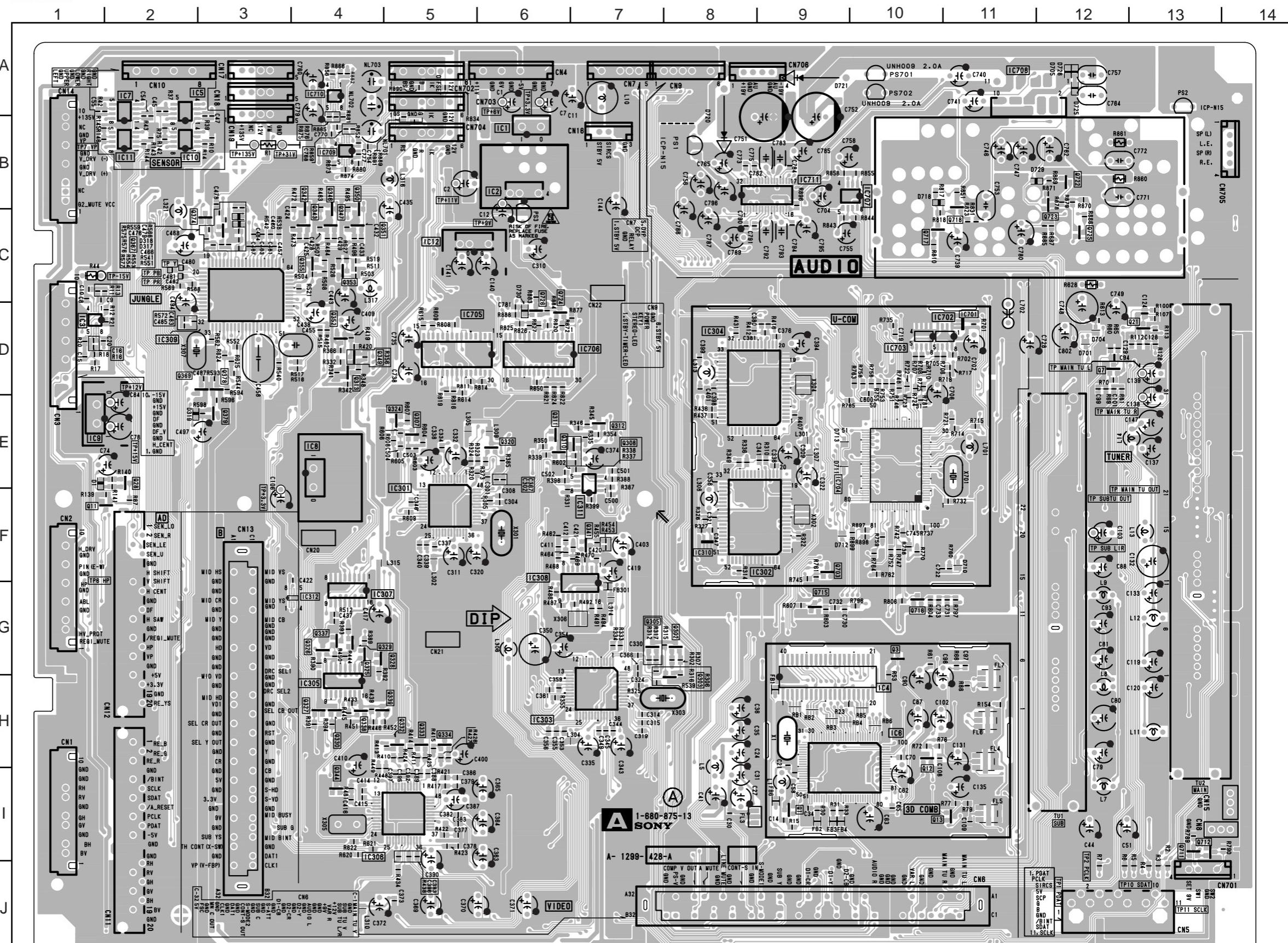
A

[TUNER, VIDEO, AUDIO, SYSTEM CONTROL]

- A Board -

A BOARD

DIODE		TRANSISTOR *	
D1	E-2	Q1	I-9
D317	C-3	Q3	G-10
D318	C-3	Q7	D-12
D319	E-2	Q11	F-1
D701	D-12	Q12	H-10
D704	D-12	Q13	I-11
D705	A-12	Q21	D-13
D710	F-11	Q302	G-8
D711	E-9	Q303	H-8
D712	F-9	Q305	G-7
D713	E-9	Q307	E-5
D718	B-10	Q308	E-7
D720	B-8	Q310	E-6
D721	A-9	Q311	E-6
D725	A-12	Q312	E-7
D726	A-12	Q313	D-4
D729	B-11	Q320	E-6
D730	D-6	Q324	E-5
IC		Q325	
IC1	B-6	Q326	G-4
IC2	B-6	Q327	H-4
IC3	D-1	Q328	G-4
IC4	H-9	Q329	G-4
IC5	A-2	Q330	H-4
IC6	H-9	Q332	H-5
IC7	A-2	Q333	H-5
IC8	E-4	Q334	H-5
IC9	E-1	Q337	G-4
IC10	B-2	Q338	H-4
IC11	B-2	Q339	H-4
IC12	C-5	Q341	F-7
IC301	F-5	Q343	C-4
IC302	F-8	Q344	I-4
IC303	H-7	Q347	C-4
IC304	D-8	Q349	D-4
IC305	H-4	Q351	C-4
IC306	I-5	Q352	D-4
IC307	G-4	Q353	C-4
IC308	D-3	Q355	C-4
IC309	C-3	Q367	C-3
IC310	F-8	Q369	D-2
IC311	F-7	Q374	C-3
IC312	G-4	Q378	D-2
IC701	D-11	Q379	E-3
IC702	D-10	Q703	F-9
IC703	D-10	Q712	I-13
IC704	F-10	Q713	I-13
IC705	D-5	Q715	G-9
IC706	D-6	Q716	G-10
IC707	B-10	Q717	C-10
IC708	A-11	Q718	B-11
IC709	B-4	Q722	B-12
IC710	A-4	Q723	B-12
IC711	B-9	Q724	D-6
		Q725	C-12
		Q726	D-6



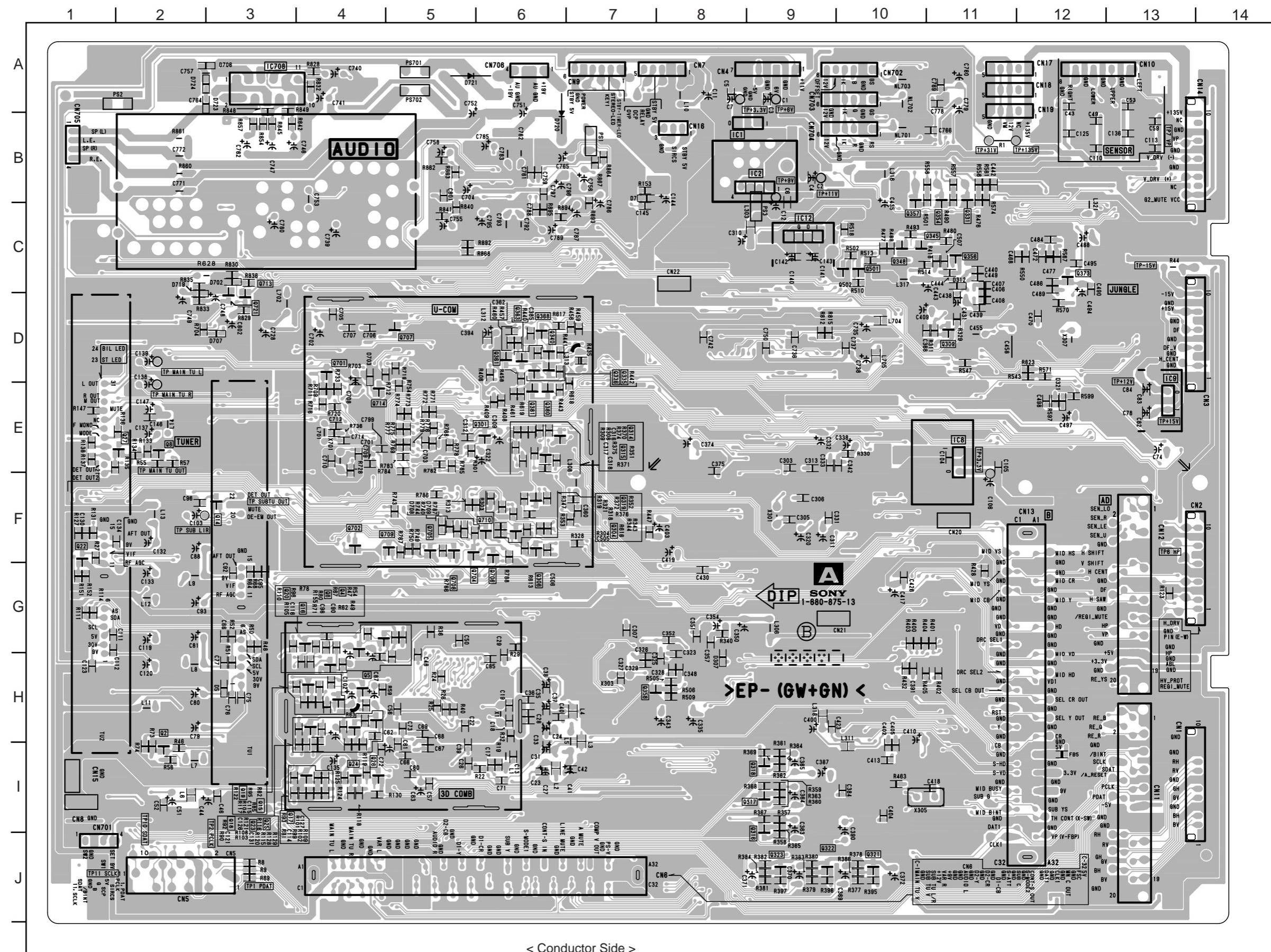
< Component Side >

A [TUNER, VIDEO, AUDIO, SYSTEM CONTROL]

– A Board –

A BOARD

DIODE		*	Q27	E-1	(1)
D5	H-3	(3)	Q28	I-4	(1)
D7	C-7	(3)	Q301	E-6	(1)
D307	H-8	(3)	Q304	F-6	(1)
D312	C-11	(3)	Q306	F-6	(1)
D321	E-12	(3)	Q309	D-11	(1)
D702	C-3	(3)	Q314	E-6	(1)
D703	E-4	(3)	Q315	E-6	(1)
D706	A-3	(3)	Q316	J-9	(1)
D708	F-5	(3)	Q317	I-9	(1)
D709	F-5	(3)	Q318	I-9	(1)
D719	D-2	(3)	Q319	F-6	(1)
D720	B-6		Q321	J-10	(1)
D721	A-5		Q322	J-10	(1)
D723	A-3	(3)	Q323	J-9	(1)
D724	A-3	(3)	Q331	C-11	(1)
IC			Q335	D-6	(1)
IC1	B-8		Q336	D-6	(1)
IC2	B-9		Q340	D-6	(1)
IC8	E-11		Q345	C-11	(1)
IC9	E-13		Q348	C-10	(1)
IC12	C-9		Q354	C-11	(1)
IC708	A-3		Q356	C-11	(1)
TRANSISTOR *			Q357	C-10	(1)
Q2	I-2	(1)	Q358	H-8	(1)
Q4	G-4	(1)	Q361	D-6	(1)
Q5	H-4	(1)	Q363	D-6	(1)
Q6	G-4	(1)	Q368	D-6	(1)
Q8	E-2	(1)	Q373	C-12	(1)
Q14	F-3	(1)	Q380	E-6	(1)
Q15	H-4	(1)	Q381	E-6	(1)
Q16	H-4	(1)	Q501	C-10	(1)
Q17	I-4	(1)	Q502	C-10	(1)
Q18	H-4	(1)	Q701	D-4	(1)
Q19	H-4	(1)	Q702	F-4	(1)
Q20	G-4	(1)	Q704	F-5	(1)
Q22	F-1	(1)	Q705	F-5	(1)
Q23	H-4	(1)	Q706	F-6	(1)
Q24	I-4	(1)	Q707	D-5	(1)
Q25	H-4	(1)	Q708	F-5	(1)
Q26	I-4	(1)	Q709	F-5	(1)
			Q710	F-6	(1)
			Q714	D-4	(1)
			Q721	D-3	(1)

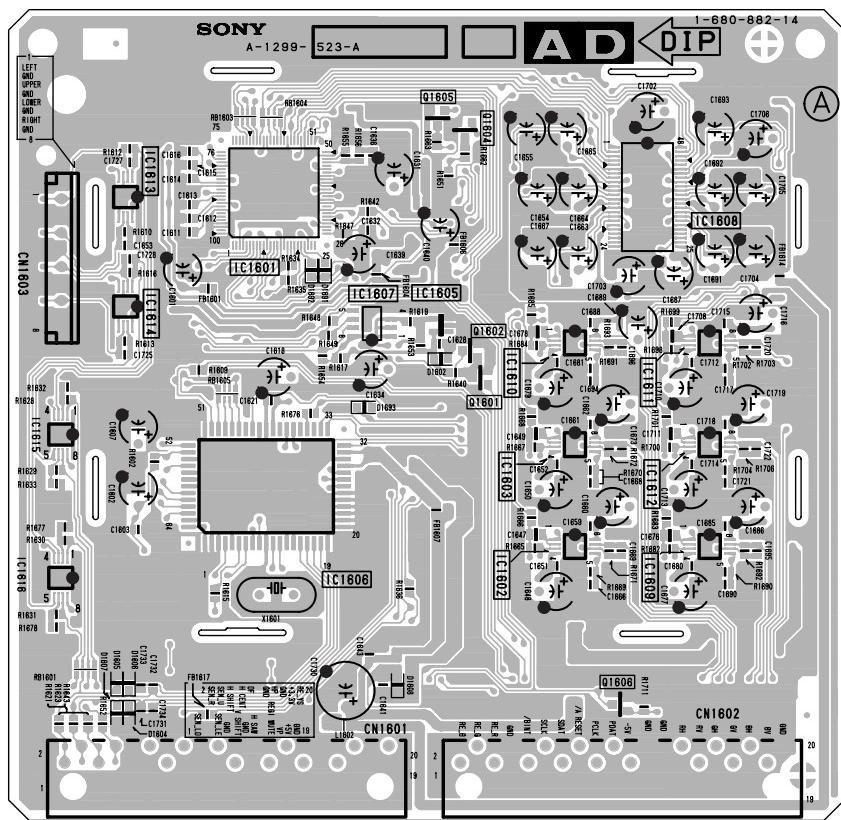


< Conductor Side >

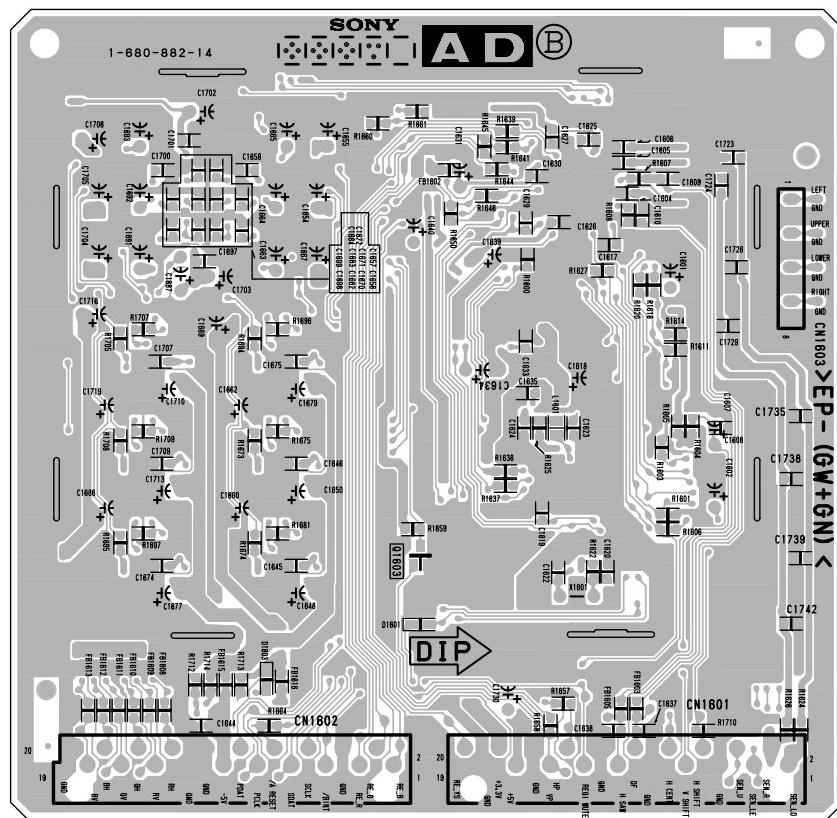
AD

[DIGITAL REGI, DJED CPU, PJE DRIVE]

- AD Board -



< Component Side >

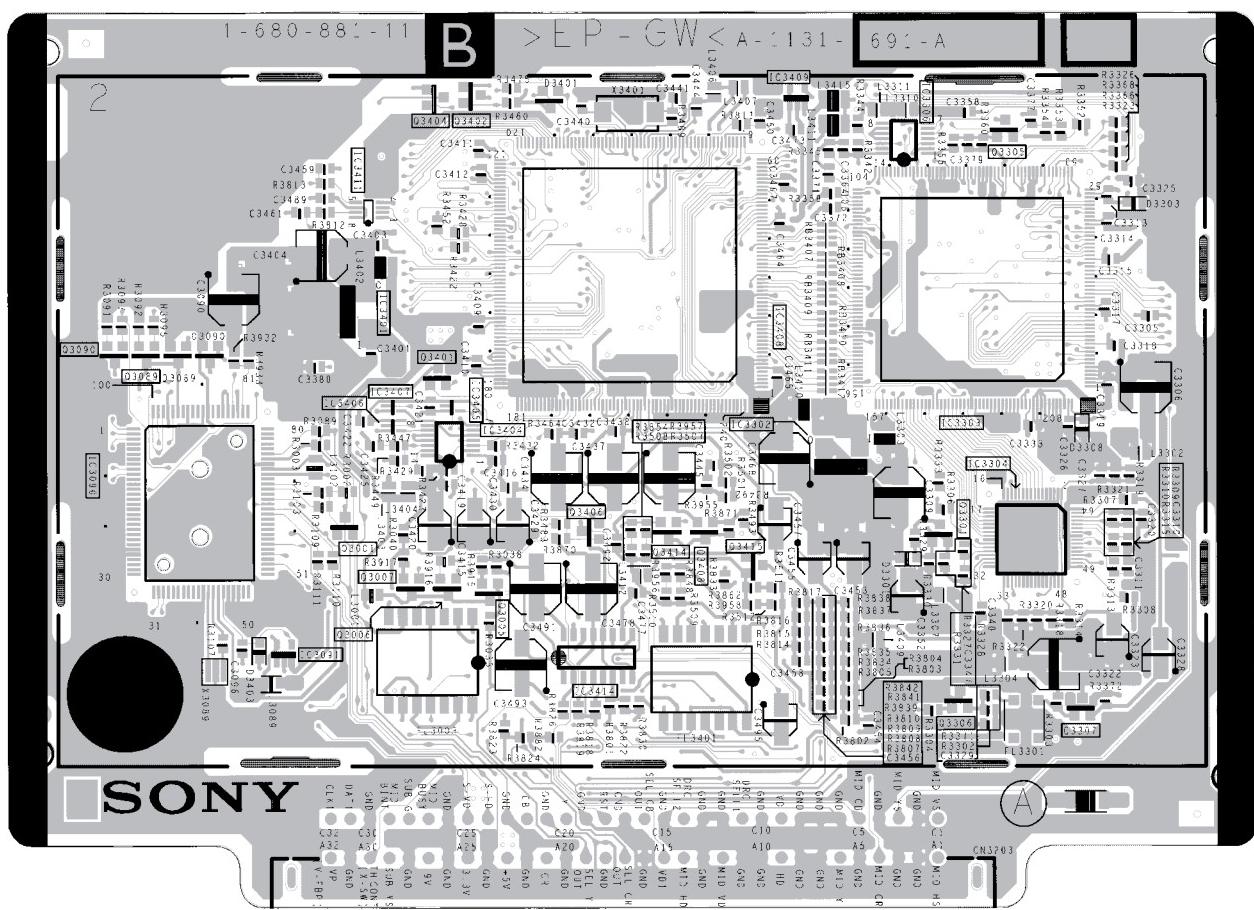


< Conductor Side >

B

[A/D CONVERTER, DRC, MULTI IMAGA DRIVER, MID-U CON, D/A CONVERTER]

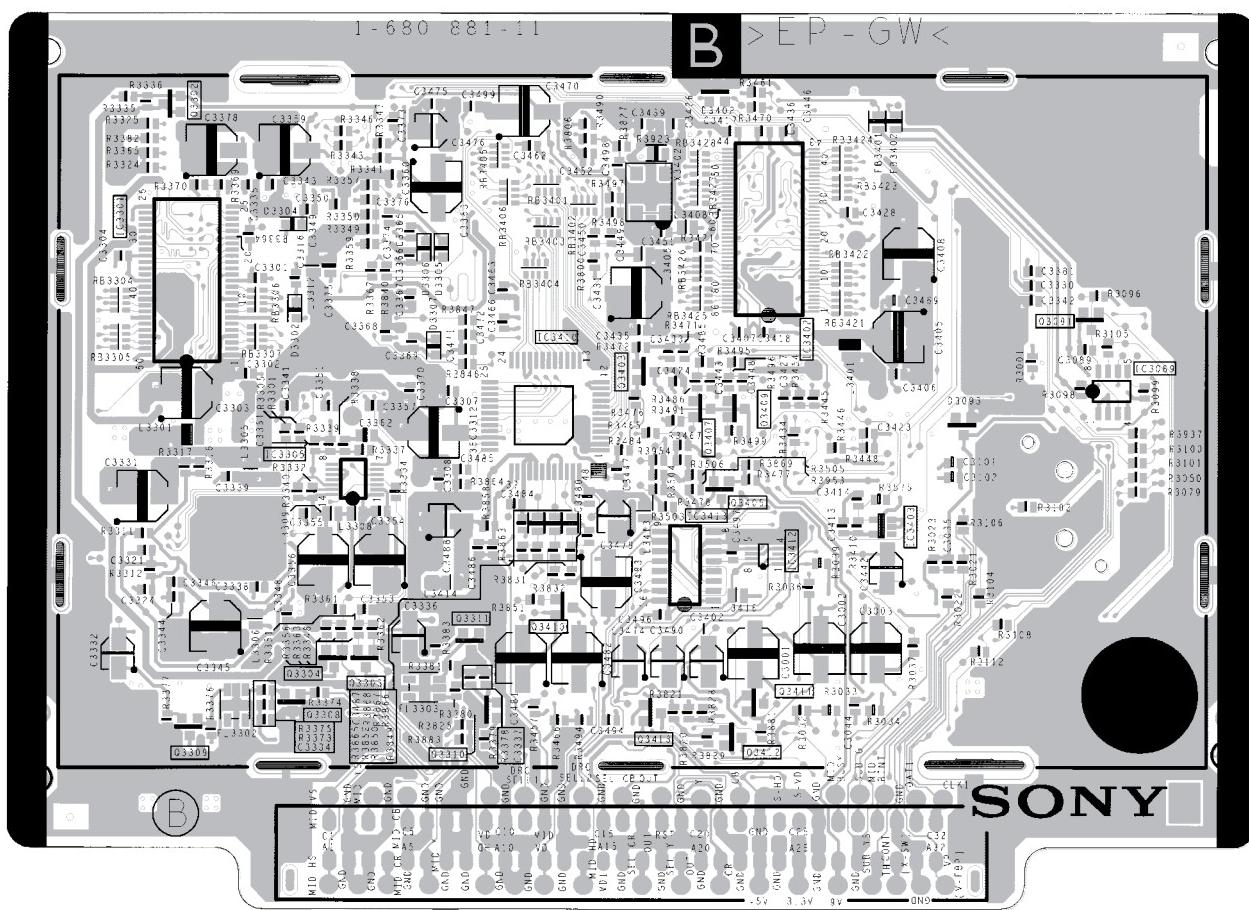
- B Board -



B

[A/D CONVERTER, DRC, MULTI IMAGA DRIVER, MID-U CON, D/A CONVERTER]

- B Board -

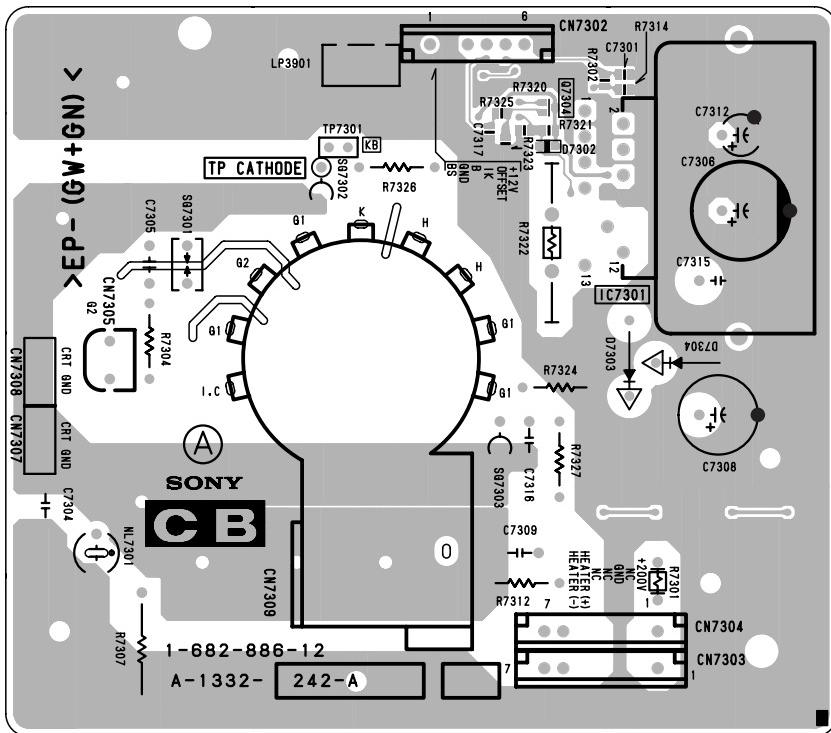


< Conductor Side >

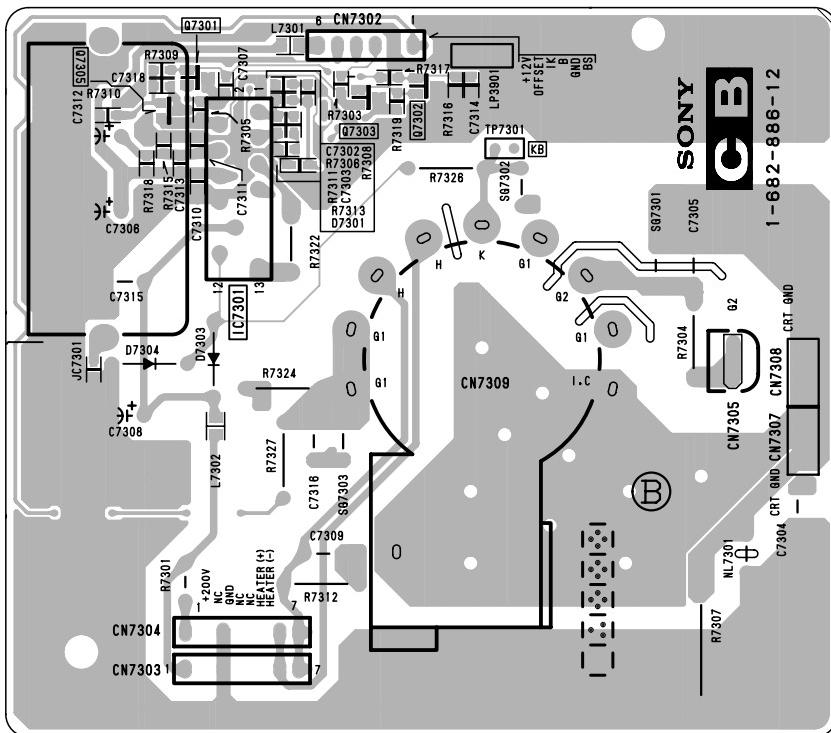
CB

[CRT I/F BLUE]

– CB Board –



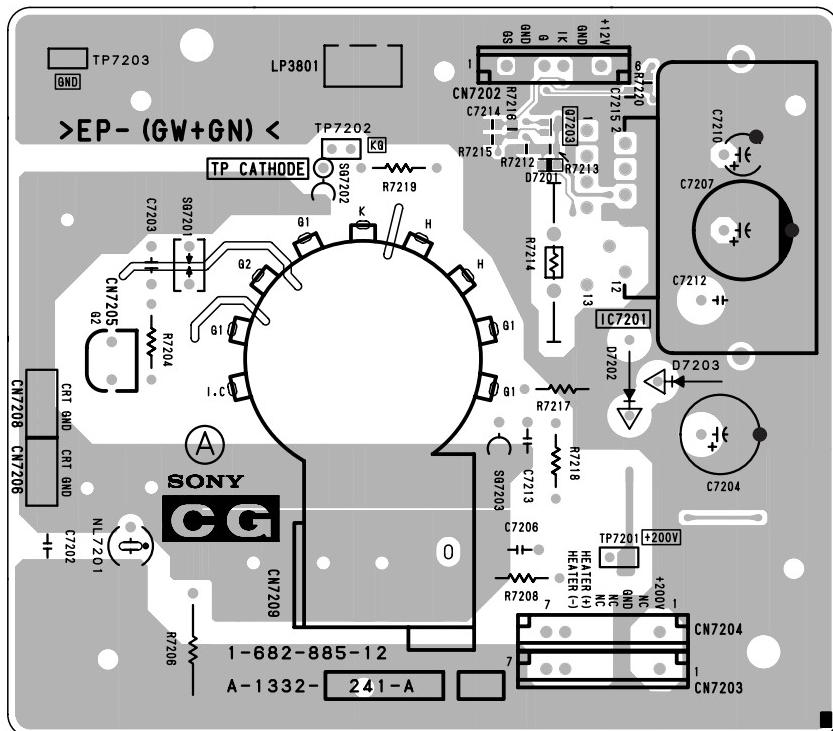
< Component Side >



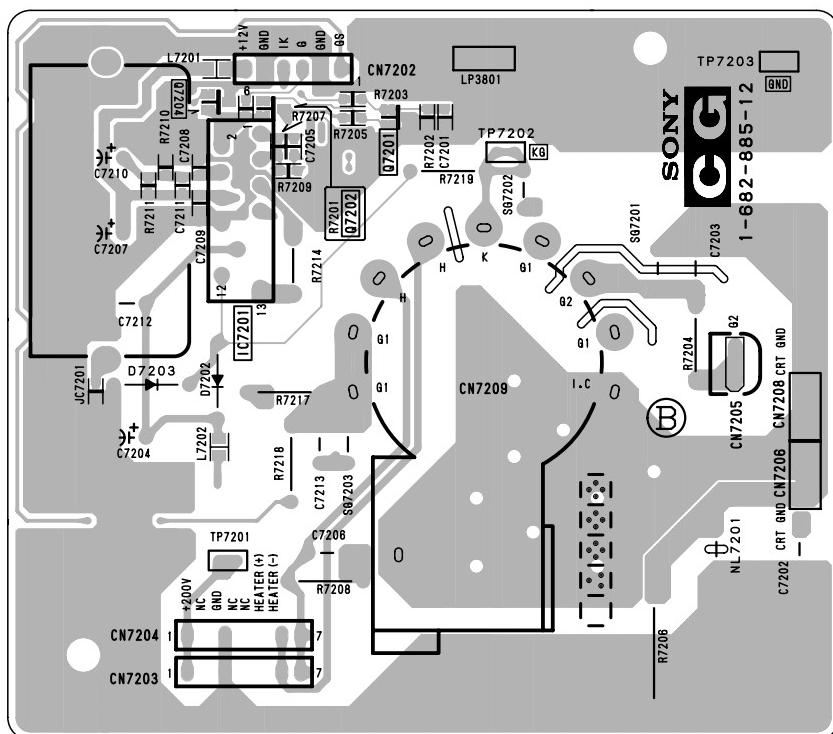
< Conductor Side >

CG [CRT I/F GREEN]

- CG Board -



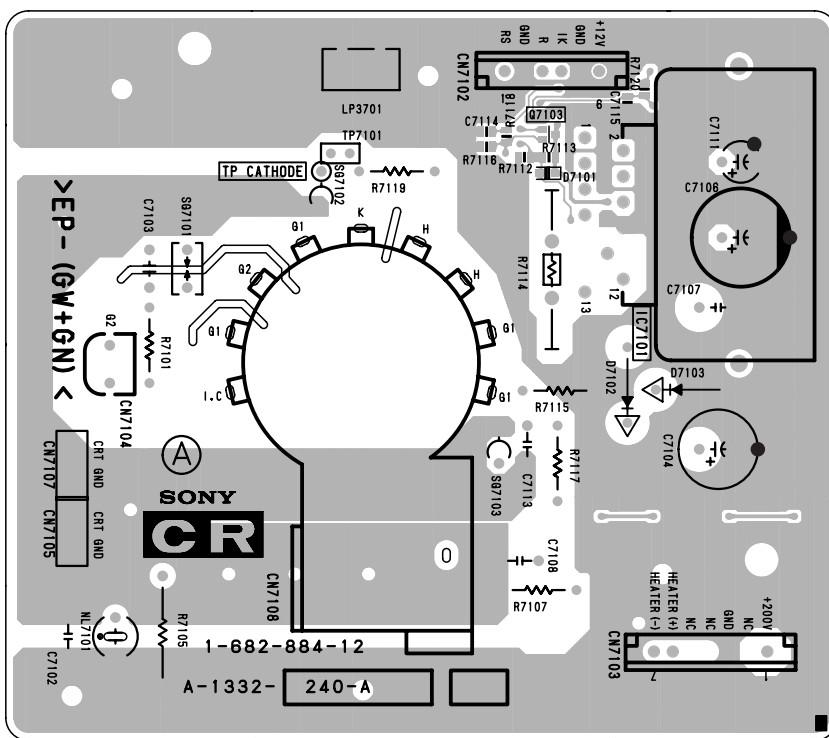
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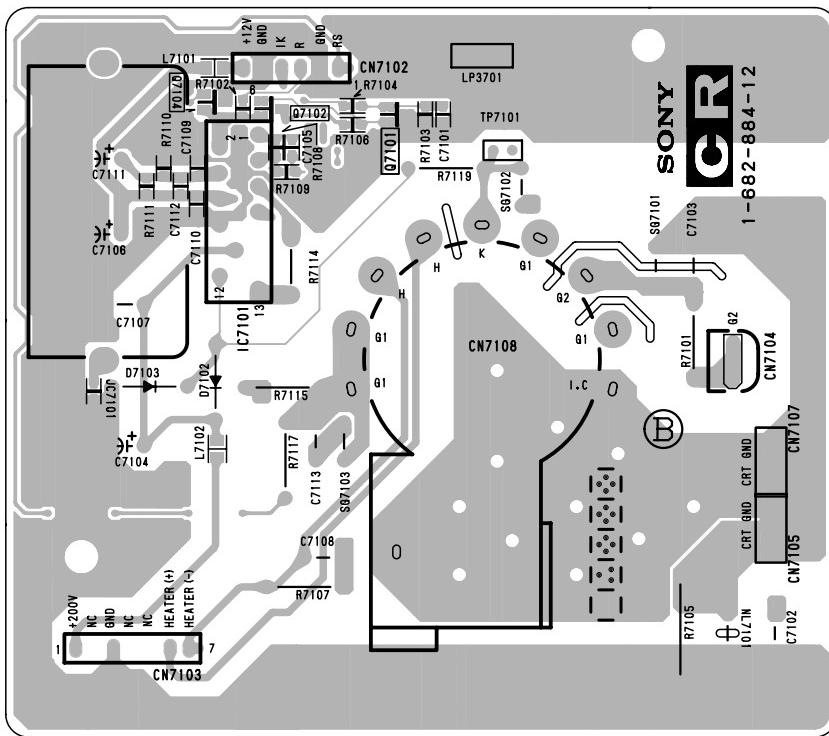
< Conductor Side >

CR [CRT I/F RED]

- CR Board -



< Component Side >



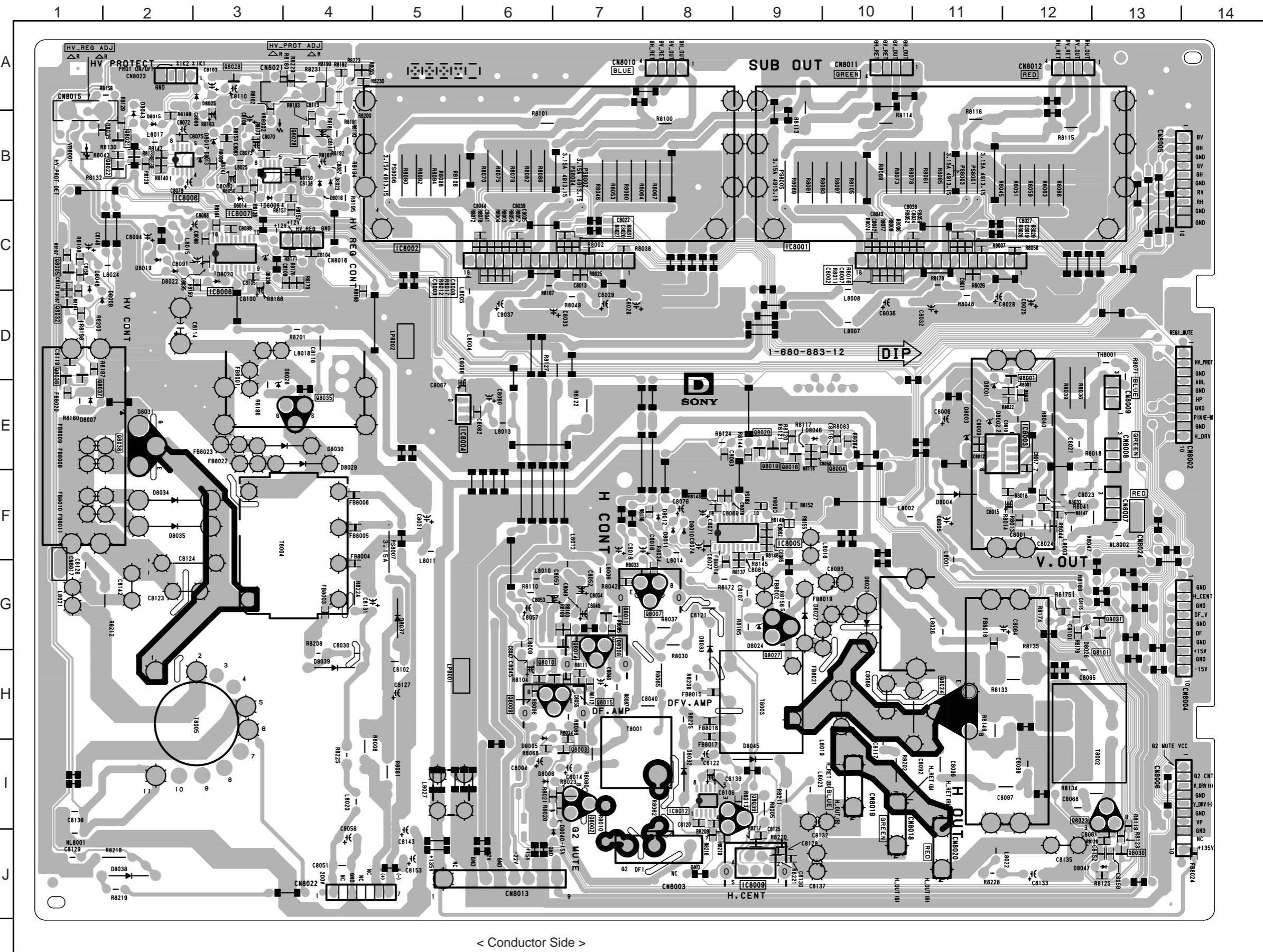
< Conductor Side >

D [HV DRIVE, POWER SUPPLY, H DRIVE]

- D Board -

D BOARD

DIODE *	TRANSISTOR *	
D8001 E-11	Q8001 E-12	①
D8002 E-11	Q8002 I-7	①
D8003 E-11	Q8003 I-7	①
D8004 F-11	Q8004 E-10	①
D8005 H-6	Q8005 C-1	①
D8006 I-6	Q8007 G-7	①
D8007 E-1	Q8008 H-7	①
D8008 C-3	Q8009 H-6	①
D8009 E-11	Q8010 H-7	①
D8010 F-8	Q8011 G-7	①
D8011 F-8	Q8014 G-7	①
D8012 F-8	Q8015 H-7	①
D8013 B-3	Q8016 E-9	①
D8014 C-3	Q8019 E-9	①
D8015 B-2	Q8020 E-9	①
D8016 B-4	Q8021 B-2	①
D8019 C-2	Q8022 B-2	①
D8020 C-3	Q8023 I-13	①
D8021 G-10	Q8024 H-11	①
D8022 C-2	Q8027 G-9	①
D8023 B-4	Q8028 A-3	①
D8024 G-9	Q8029 B-4	①
D8025 A-3	Q8030 J-13	①
D8026 G-12	Q8031 G-13	①
D8027 G-9	Q8032 D-1	①
D8028 E-3	Q8035 I-4	①
D8029 E-4	Q8036 E-1	①
D8030 E-4	Q8037 E-1	①
D8031 E-2	Q8038 E-2	①
D8032 I-8	Q8039 I-9	①
D8033 H-8	Q8101 G-13	①
D8034 F-2		
D8035 F-2		
D8036 C-3		
D8037 G-5		
D8038 J-2		
D8039 H-4		
D8043 B-2		
D8045 I-9		
D8046 E-9		
D8047 J-13		
IC		
IC8001 C-11		
IC8002 C-6		
IC8003 E-12		
IC8004 E-5		
IC8005 F-9		
IC8006 B-2		
IC8007 B-3		
IC8008 C-3		
IC8009 J-9		
IC8012 I-8		



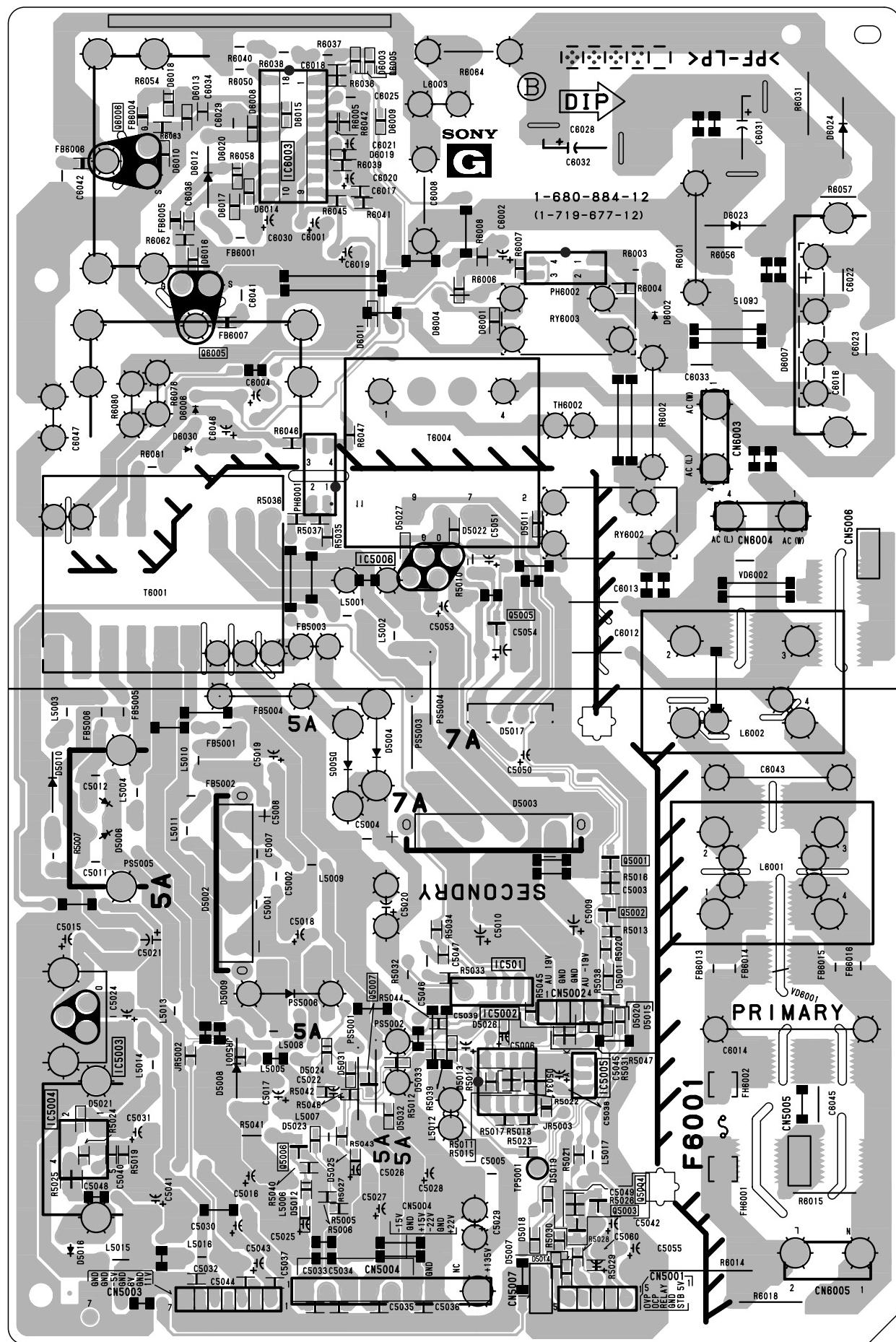
< Conductor Side >

G

[RELAY DRIVE, STBY 5V, REGULATOR, POWER SUPPLY]

KP-43HT20/53HS20/53HS30/61HS20/61HS30
RM-Y908 RM-Y908 RM-Y908 RM-Y908 RM-Y908

- G Board -



H1

[POWER SWITCH]

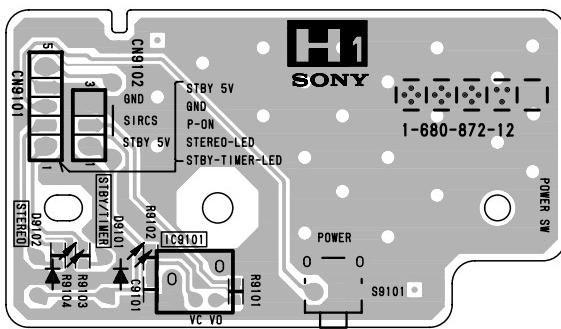
H2

[FUNCTION KEK]

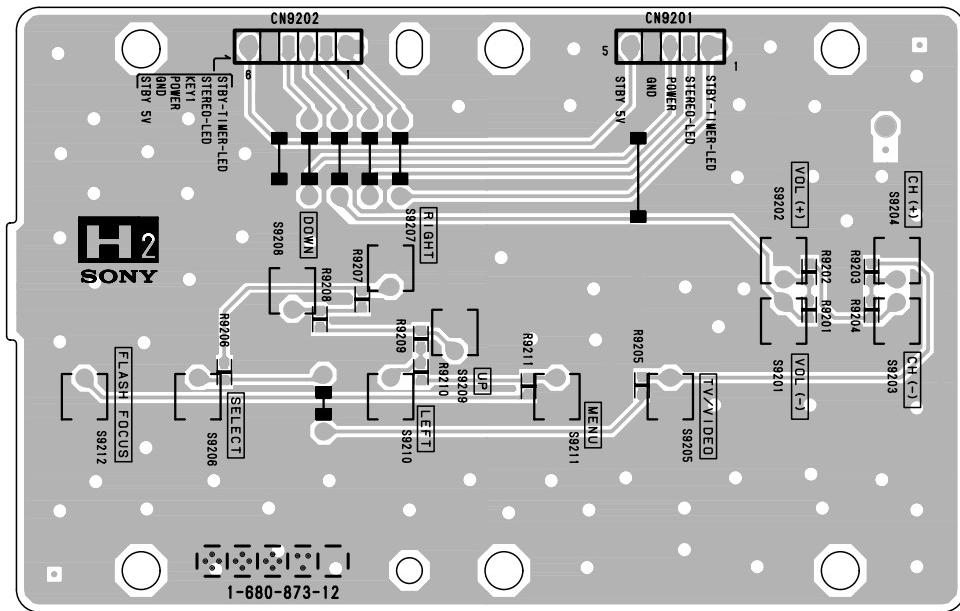
H3

[VIDEO 2 INPUT]

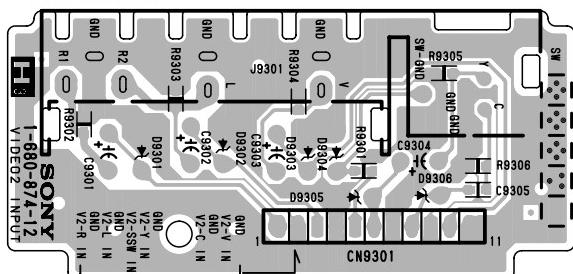
- H1 Board -



- H2 Board -



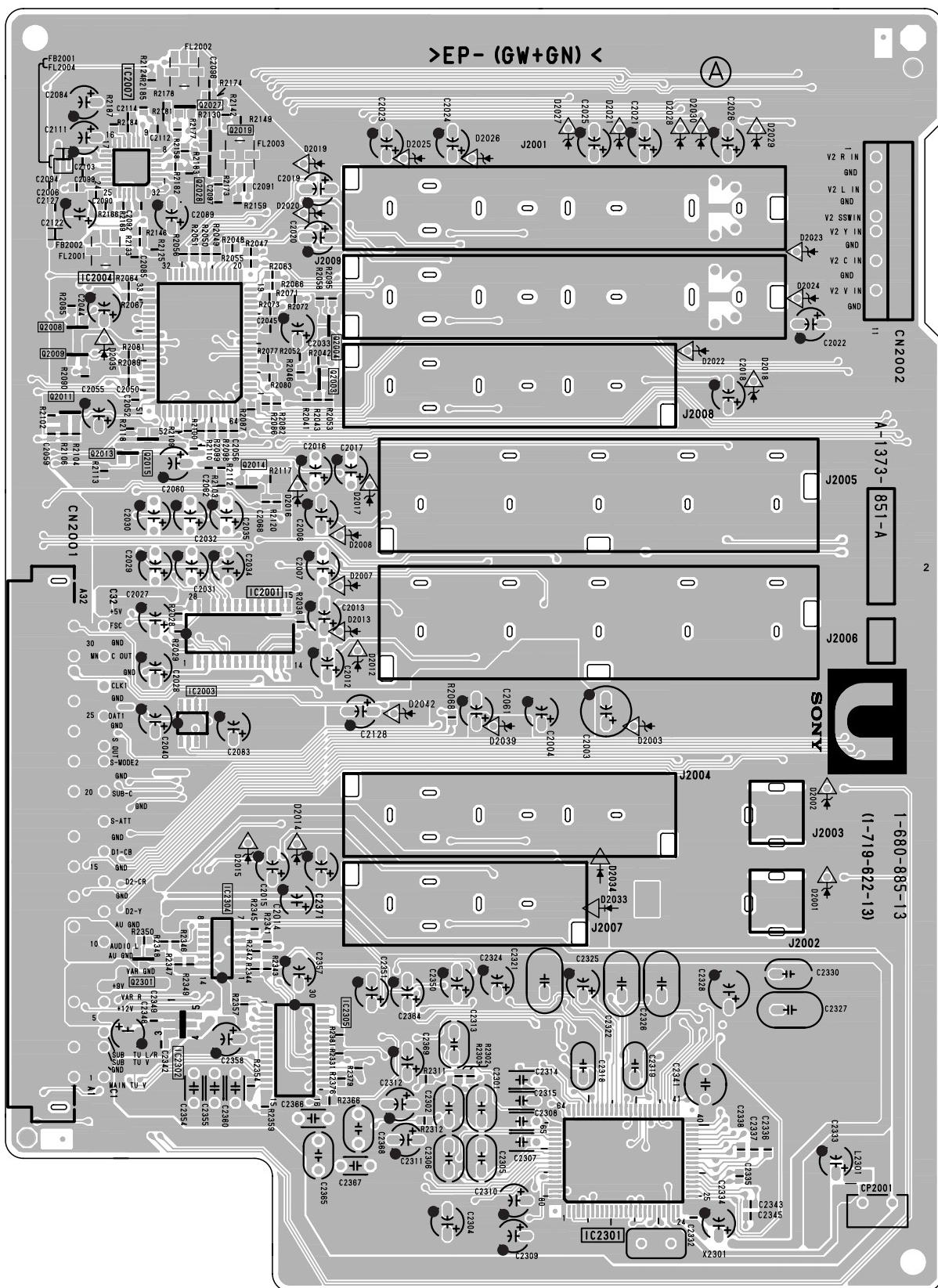
- H3 Board -



U

[VIDEO, AUDIO INPUT/OUTPUT, AV SWITCH, AUDIO PROCESSOR]

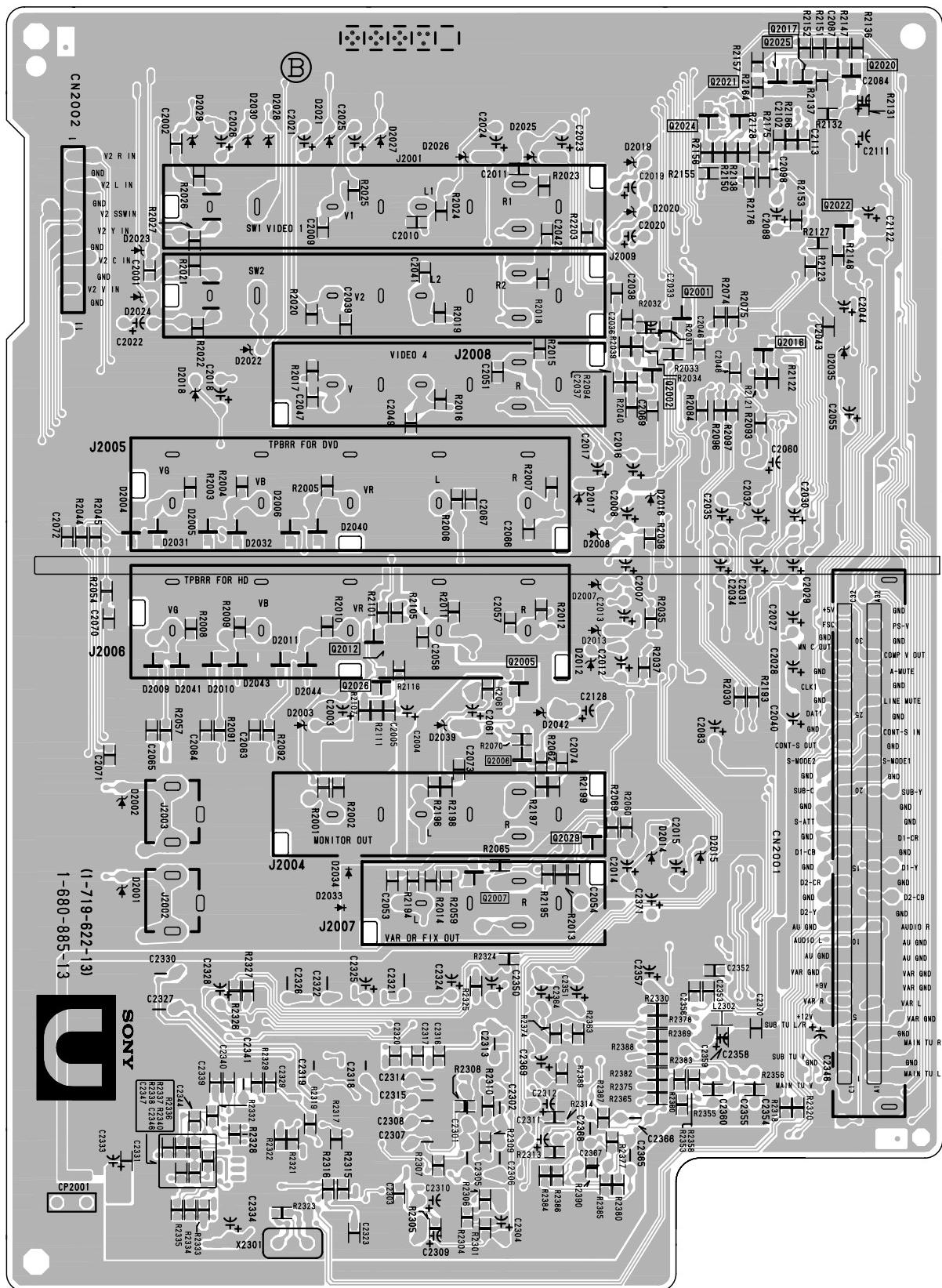
- U Board -



U

[VIDEO, AUDIO INPUT/OUTPUT, AV SWITCH, AUDIO PROCESSOR]

- U Board -



< Conductor Side >

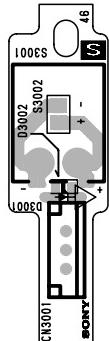


[SENSOR]

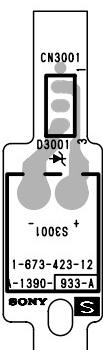


[SPEED MODULATION]

- S Board -

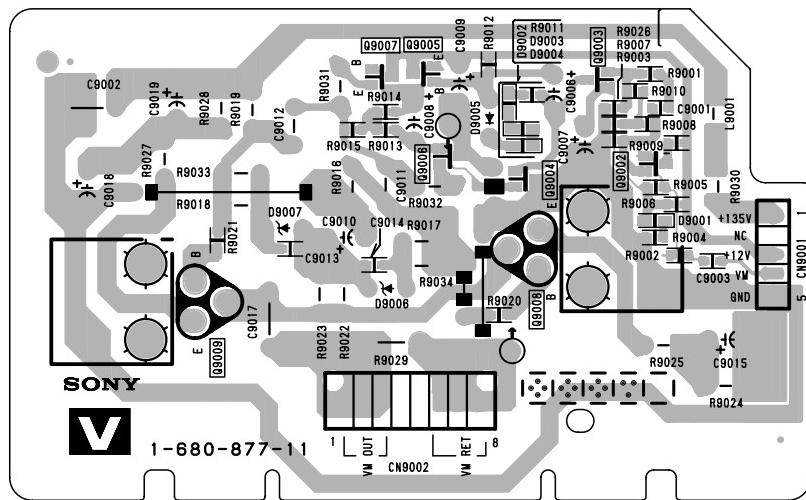


< Component Side >



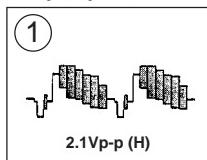
< Conductor Side >

- V Board -

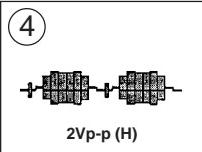
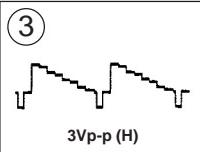
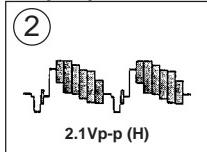


6-5. WAVEFORMS

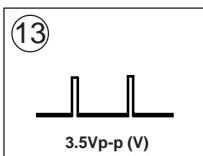
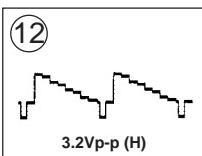
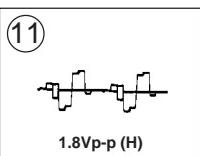
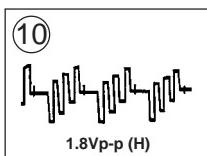
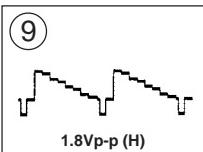
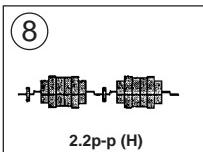
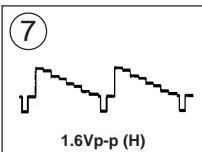
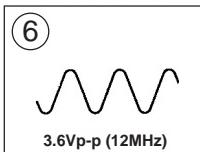
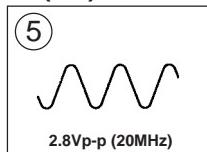
• A(1/9) BOARD WAVEFORMS



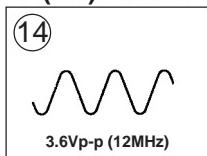
• A(2/9) BOARD WAVEFORMS



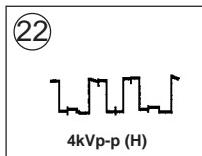
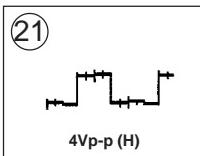
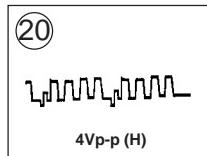
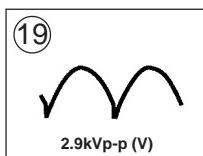
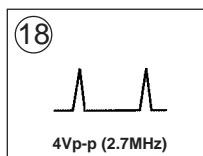
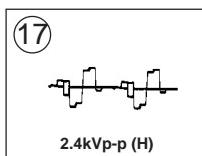
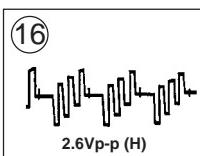
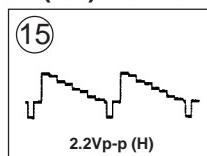
• A(3/9) BOARD WAVEFORMS



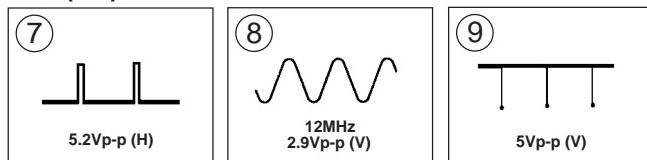
• A(4/9) BOARD WAVEFORMS



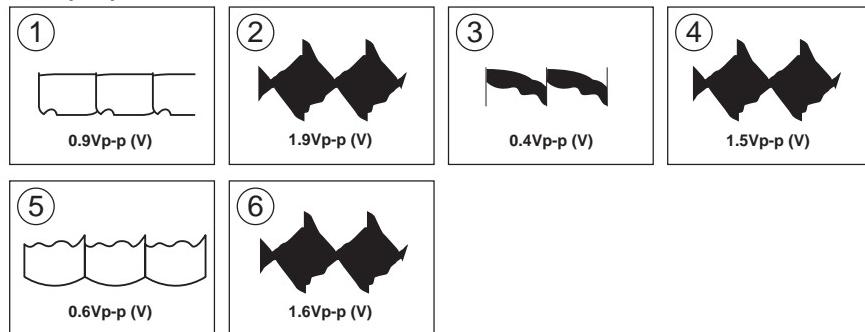
• A(5/9) BOARD WAVEFORMS



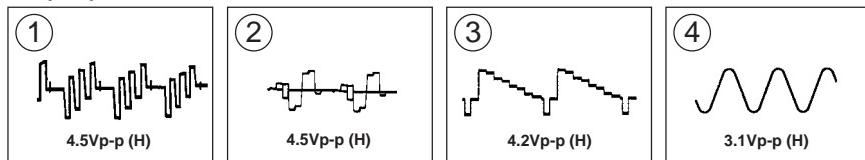
• AD(1/2) BOARD WAVEFORMS



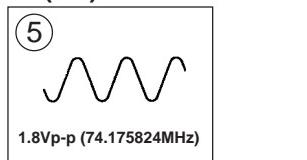
• AD(2/2) BOARD WAVEFORMS



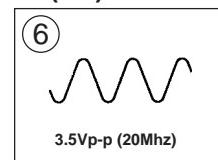
• B(1/4) BOARD WAVEFORMS



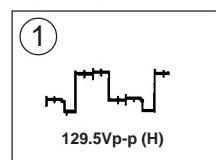
• B(3/4) BOARD WAVEFORMS



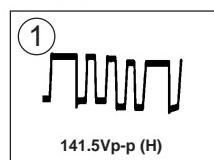
• B(4/4) BOARD WAVEFORMS



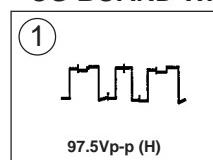
• CR BOARD WAVEFORM



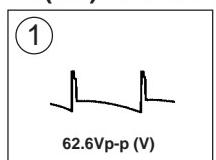
• CB BOARD WAVEFORM



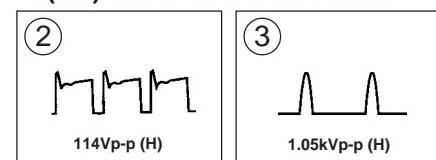
• CG BOARD WAVEFORMS



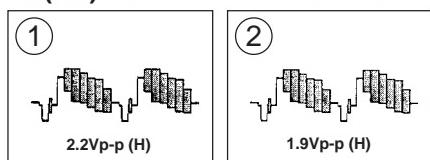
• D(1/3) BOARD WAVEFORMS

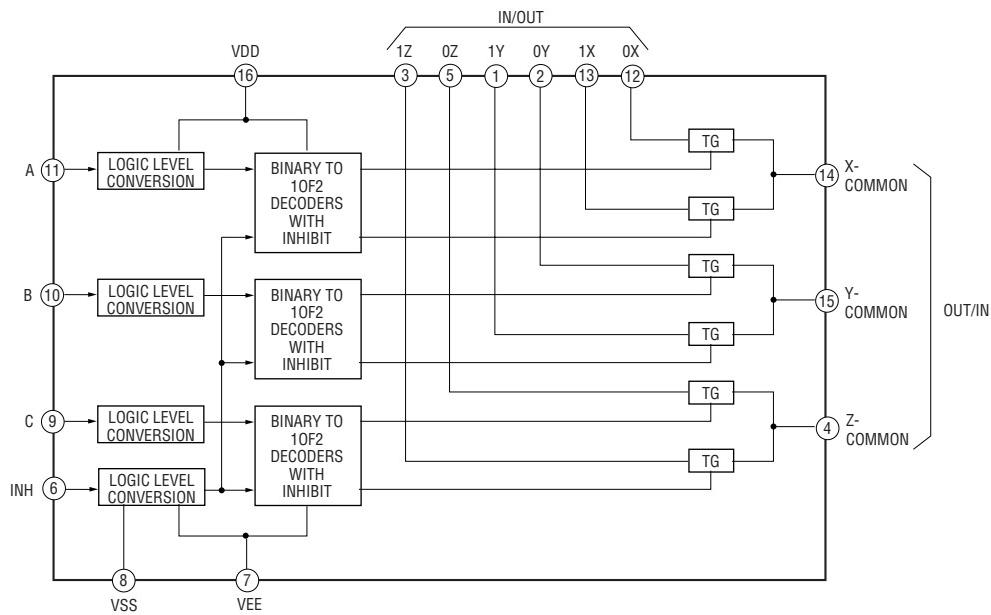
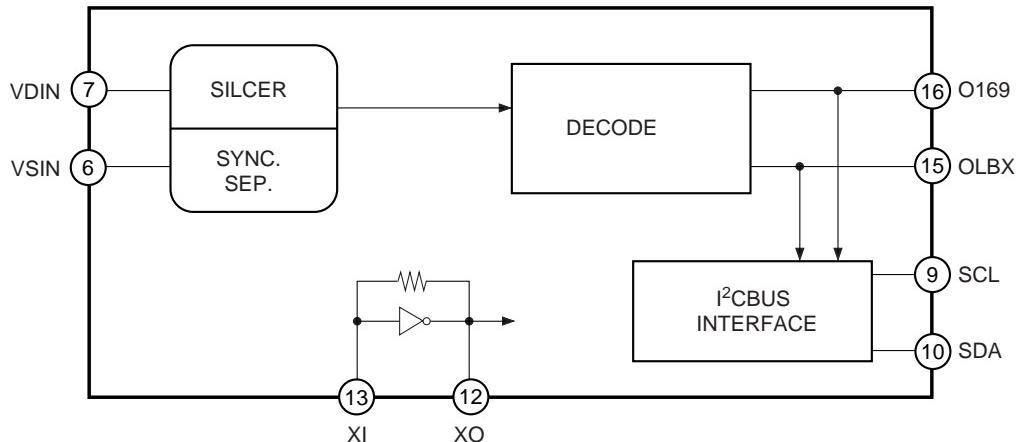
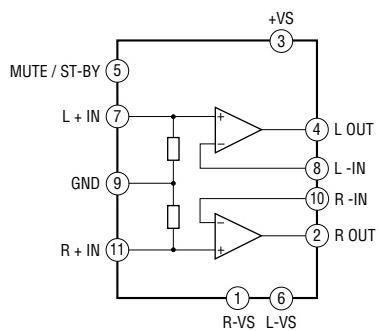


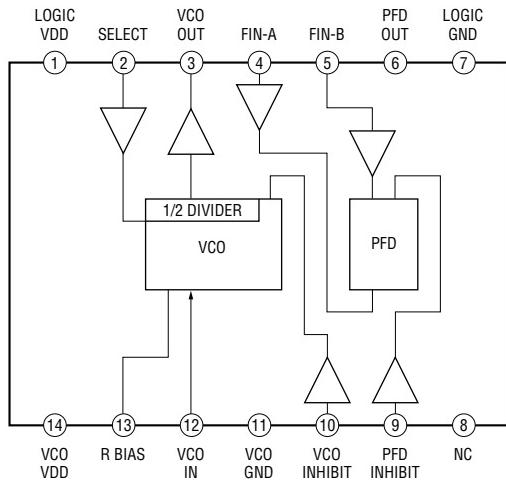
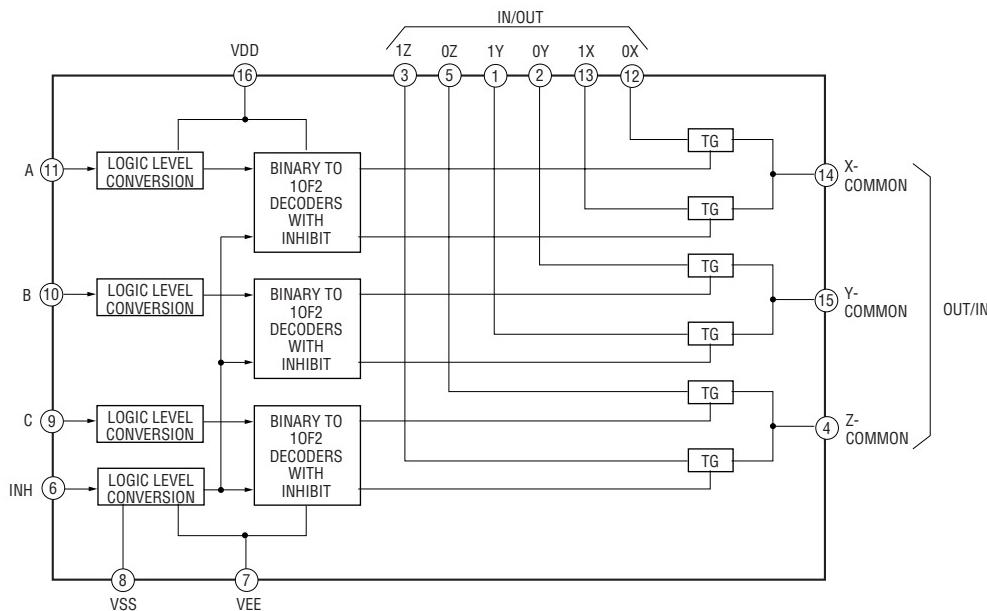
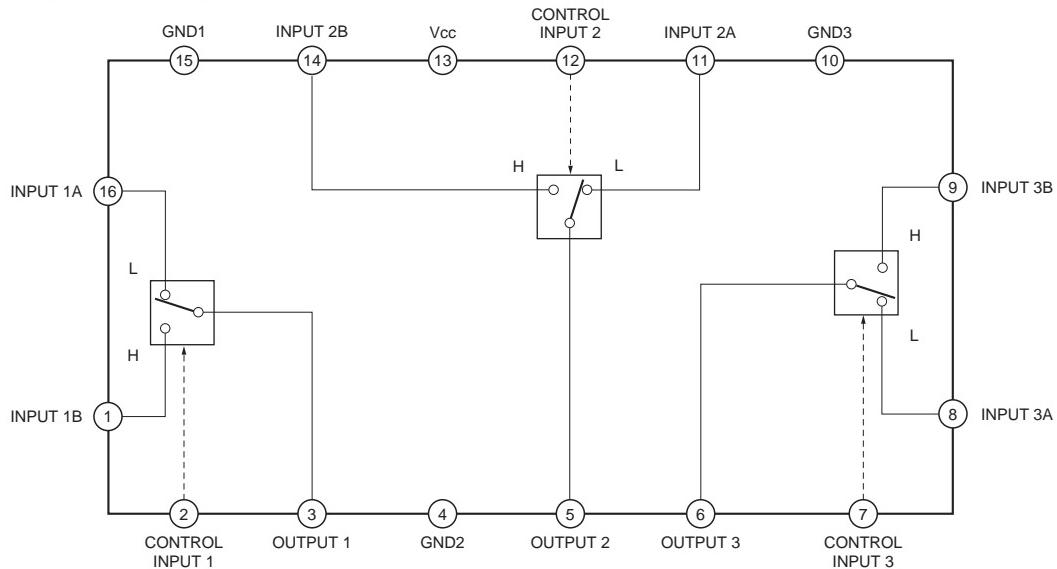
• D(3/3) BOARD WAVEFORMS



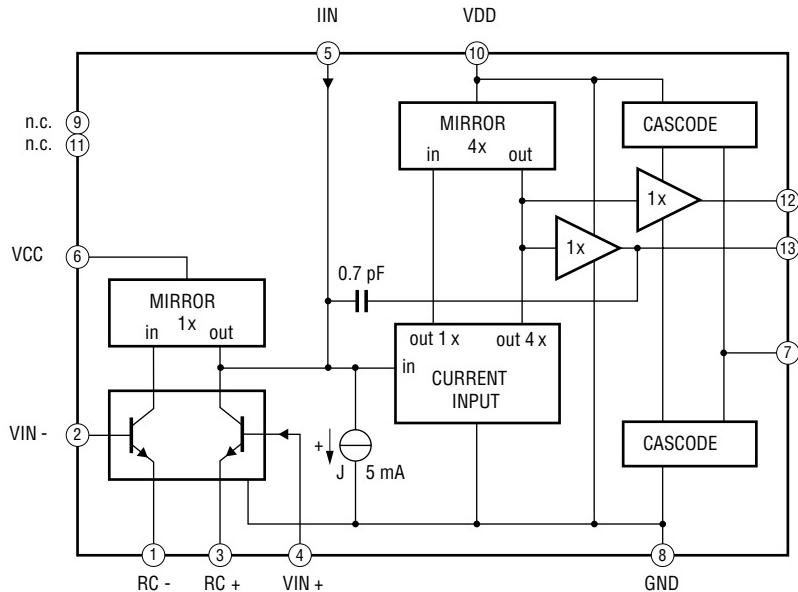
• U(2/3) BOARD WAVEFORMS



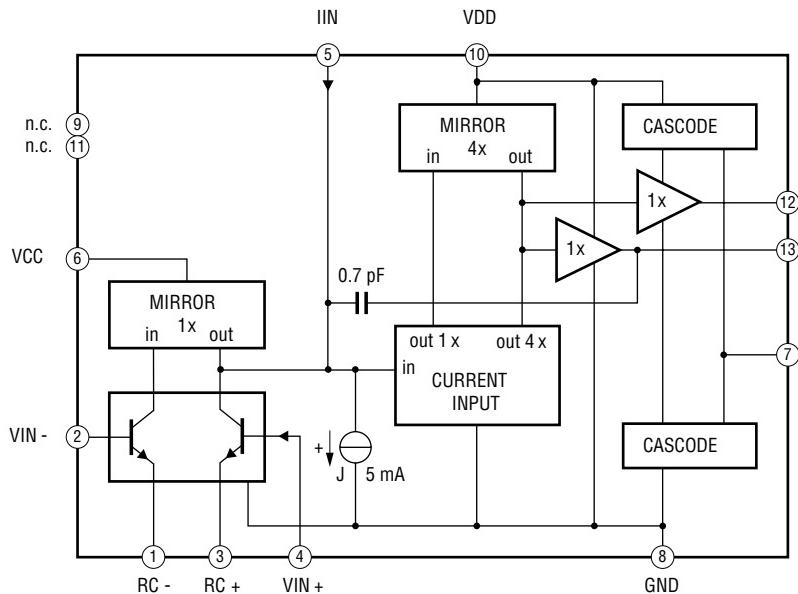
6-6. IC BLOCK DIAGRAMS**A BOARD : IC305, 307 SN74LV4053ANSR****A BOARD : IC308 CXD2085M****A BOARD : IC708 TDA7265**

B BOARD : IC3305, 3404 TLC2932IPWR**B BOARD : IC3413 SN74LV4053ANSR****B BOARD : IC3414 M52055P**

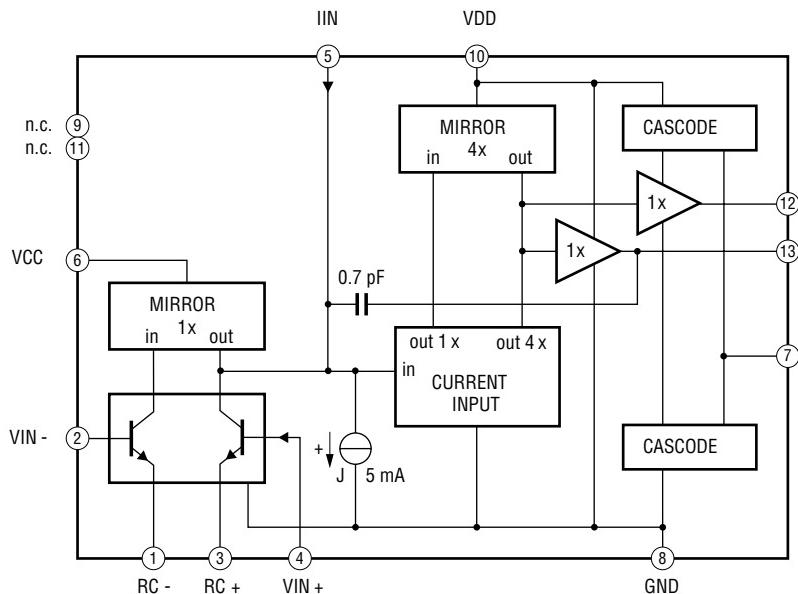
CR BOARD : IC7101 TDA6120Q



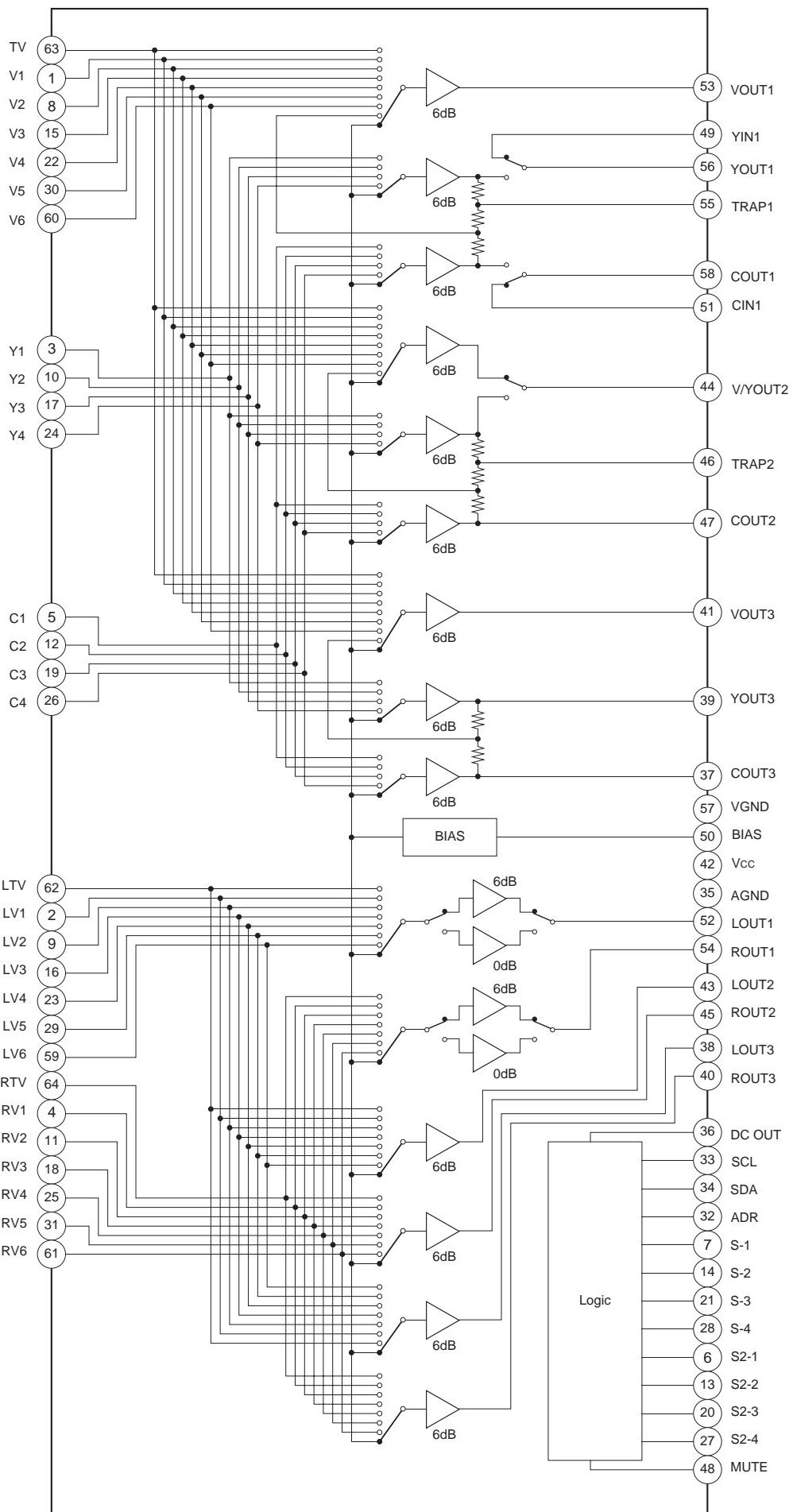
CG BOARD : IC7201 TDA6120Q



CB BOARD : IC7301 TDA6120Q

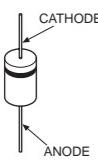


U BOARD : IC2004 CXA2069Q

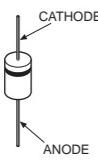


6-7. SEMICONDUCTORS

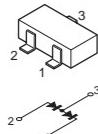
1SS83TD
21DP05
D1NL40-TR2
D1NS4
D2L20U
EL1Z
GP08DPKG23
RD10ES-B2
RD15ES-B2
RD18ES-B2
RD20ES-B2
RD5.6ES-B2
RGP02-17EL-6433
UF4005PKG23



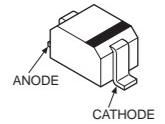
1SS133T-77
30DF4N-FC5
ERC04-06SE
ERC91-02



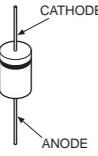
1SS226



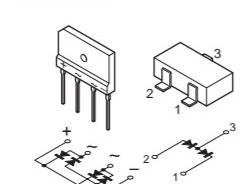
1S355TE-17
DTZ-10B
DTZ-TT11-6.8B
UDZS-TE-17-7.5B
UDZ-TE-17-10B
UDZS-TE-17-18B
UDZS-TE-17-22B
UDZS-TE-17-24B
UDZS-TE-17-3.9B
UDZS-TE-17-33B
UDZS-TE-17-4.7B
UDZS-TE-17-5.1B
UDZS-TE-17-5.6B
UDZS-TE-17-6.2B
UDZS-TE-17-9.1B



D1NL20U-TR



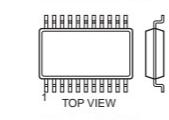
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BA05T



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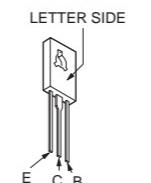
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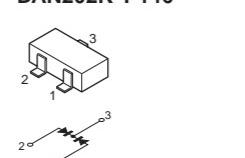
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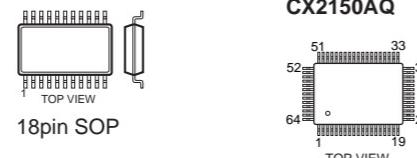
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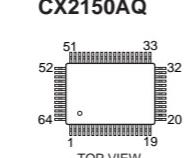
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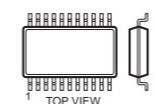
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CXP85840A-039Q
CXP86448-635Q
CX2150AQ



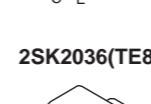
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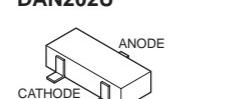
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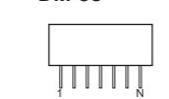
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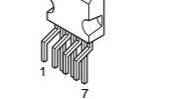
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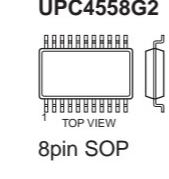
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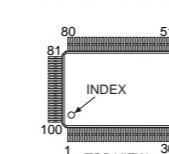
CM0017AF



M24C08-MN6T
M24C32-WMN6T
NJM2068V
NJM2904M
UPC4558G2



M306V2ME-175FP
UPD64082GF-3BA



TC7W08FU(TE12R)



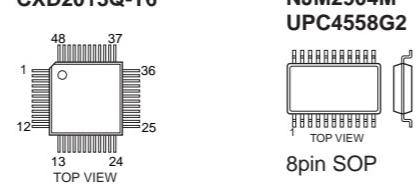
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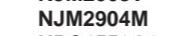
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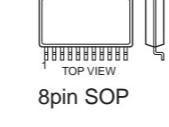
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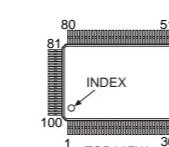
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STK392-560



MSM514265C-60JS



SLR-325VCT31



CXD2073Q-T4



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TA7812S



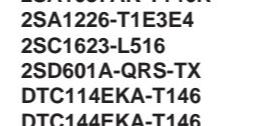
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TDA6120Q / N2/S2



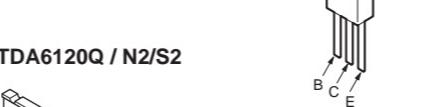
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2SA2005



TDA6120Q / N2/S2



SECTION 7

EXPLODED VIEWS

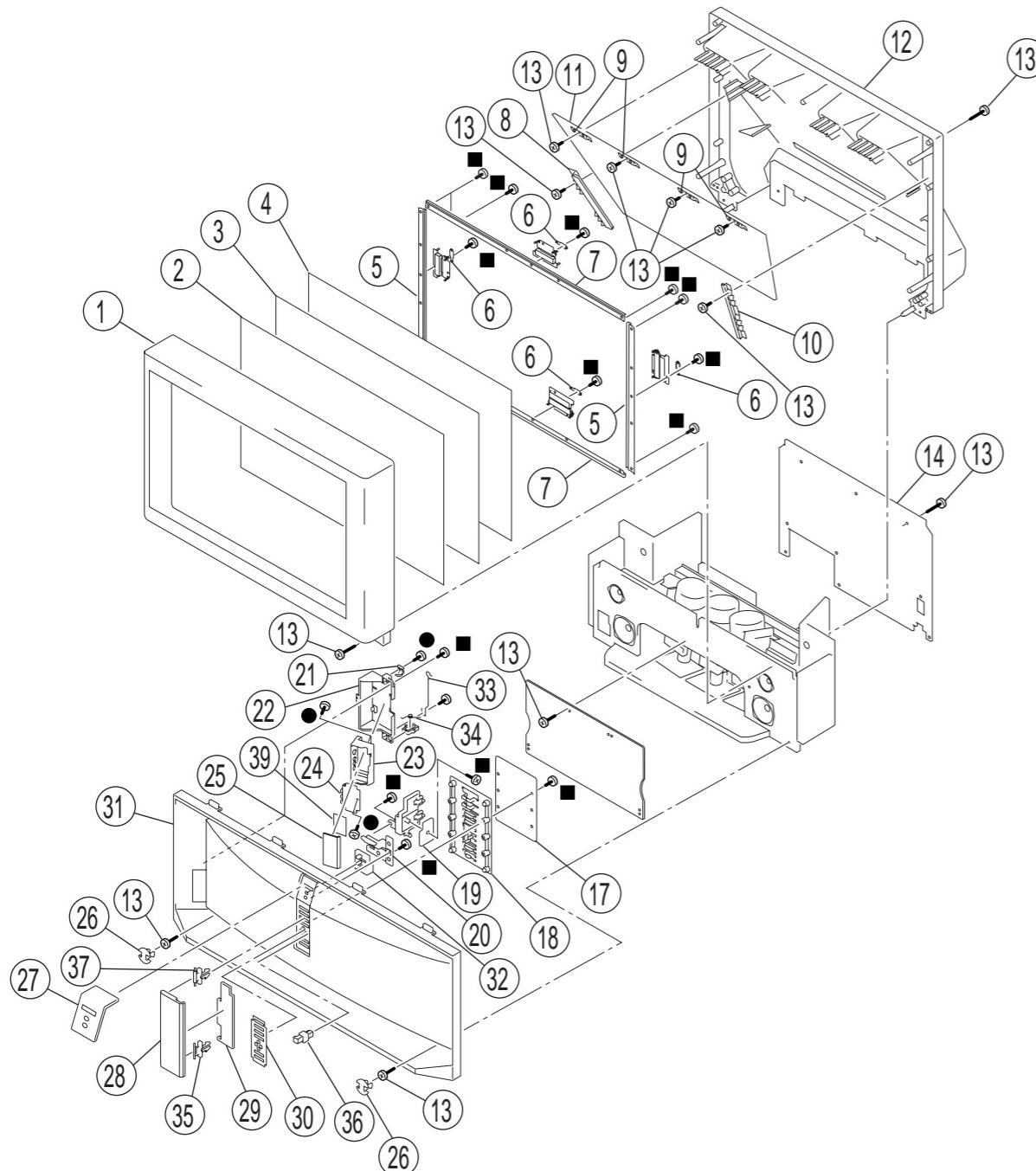
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

7-1. COVER

- : +BVTP 3X12 7-685-648-79
- : +BVTP 4X12 7-685-661-14



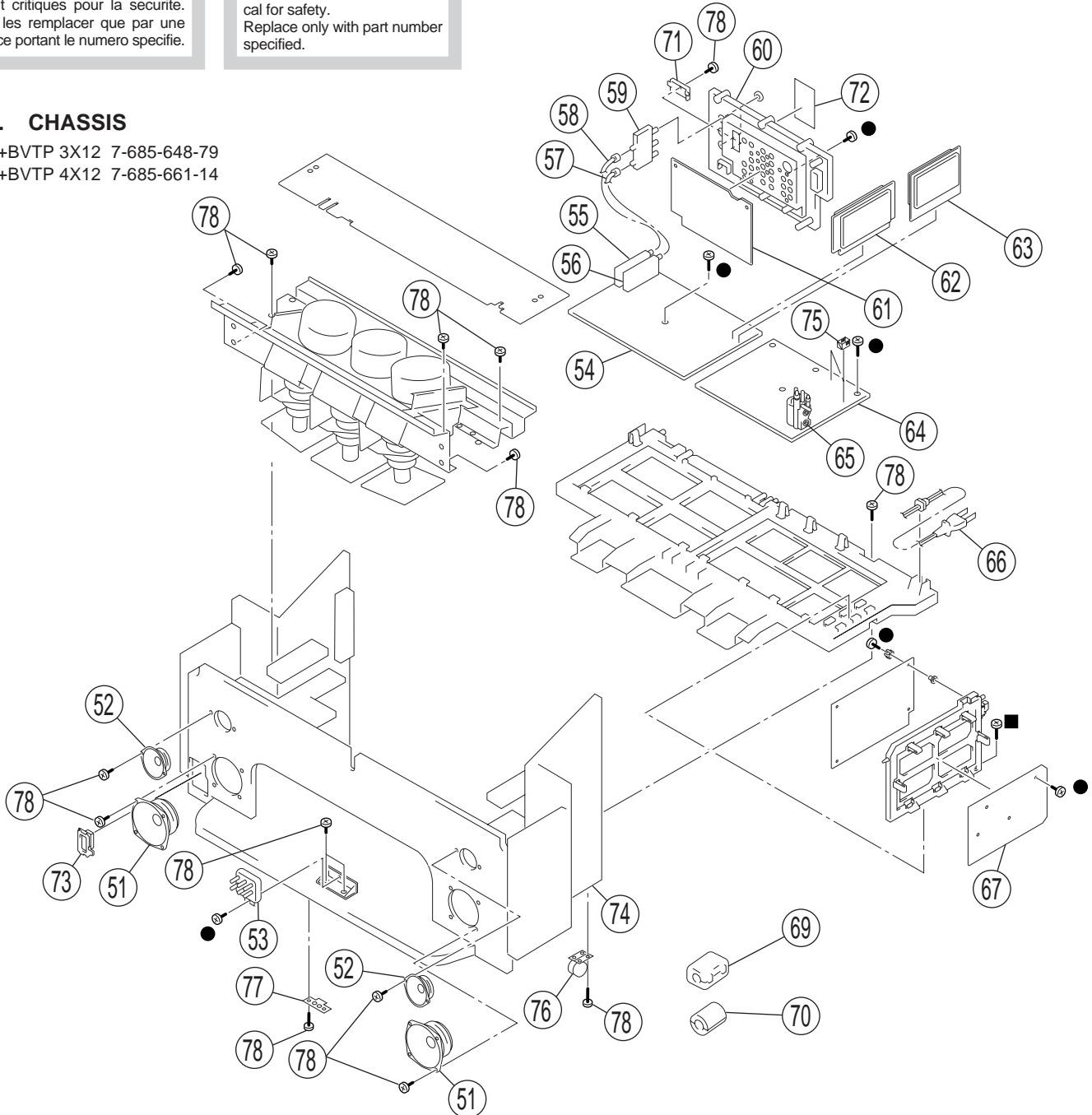
REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4039-325-1	BEZEL (57) ASSY (57HW40)		17	* A-1372-932-A	H2 BOARD, COMPLETE	
	X-4039-331-1	BEZEL (51) ASSY (51HW40)		18	4-082-284-01	BUTTON, MULTI	
2	4-081-951-11	SCREEN (57W), CONTRAST (57HW40)		19	* A-1377-041-A	H1 BOARD, COMPLETE (VAR)	
	4-081-954-11	SCREEN (51W), CONTRAST (51HW40)		20	4-082-283-01	BUTTON, POWER	
3	4-081-949-11	PLATE (57WL), DIFFUSION (57HW40)		21	4-919-393-01	DAMPER	
	4-081-952-11	PLATE (51WL), DIFFUSION (51HW40)		22	4-082-289-01	HOLDER, FRONT TERMINAL	
4	4-081-950-11	PLATE (57WFV), DIFFUSION (57HW40)		23	4-082-288-02	BRACKET, H3	
	4-081-953-11	PLATE (51WFV), DIFFUSION (51HW40)		24	* A-1372-933-A	H3 BOARD, COMPLETE	
5	* 4-084-568-01	HOLDER, SCREEN (57HW40)		25	4-083-468-01	DOOR, FRONT TERMINAL	
	* 4-084-617-01	HOLDER, SCREEN (51HW40)		26	4-083-503-01	SCREW CAP, GRILLE	
6	* A-1391-148-A	S BOARD, COMPLETE		27	4-083-732-01	PANEL (HW), FRONT	
				28	4-083-730-01	DOOR (HW), CONTROL	
7	* 4-084-568-11	HOLDER, SCREEN (57HW40)		29	4-083-731-01	COVER (HW), CONTROL DOOR	
	* 4-084-617-11	HOLDER, SCREEN (51HW40)		30	4-084-571-01	LABEL (HW), CONTROL	
8	* 4-083-460-01	HOLDER (L), MIRROR SIDE (51HW40)		31	X-4039-326-1	GRILLE ASSY, SPEAKER (57HW40)	
	* 4-083-462-01	HOLDER (L), MIRROR SIDE (57HW40)			X-4039-332-1	GRILLE ASSY, SPEAKER (51HW40)	
9	* 4-081-501-01	HOLDER, MIRROR		32	4-083-733-01	GUIDE (HW), LED	
10	* 4-083-459-01	HOLDER (R), MIRROR SIDE (51HW40)		33	4-084-564-01	SPRING (H3)	
	* 4-083-461-01	HOLDER (R), MIRROR SIDE (57HW40)		34	4-083-505-01	SPRING, DOOR	
11	4-084-561-01	MIRROR (57) (57HW40)		35	3-703-035-11	SHAFT, LID	
	4-084-615-01	MIRROR (51) (51HW40)		36	4-042-192-01	CATCHER, PUSH	
12	* 4-083-466-01	COVER (57), MIRROR (57HW40)		37	4-045-250-01	DAMPER	
	* 4-083-467-01	COVER (51), MIRROR (51HW40)		39	4-082-290-01	LABEL, FRONT TERMINAL	
13	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20					
14	* 4-084-577-01	BOARD, REAR (57HW40)					
	* 4-084-622-01	BOARD (51), REAR (51HW40)					

Les composants identifiés par une trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

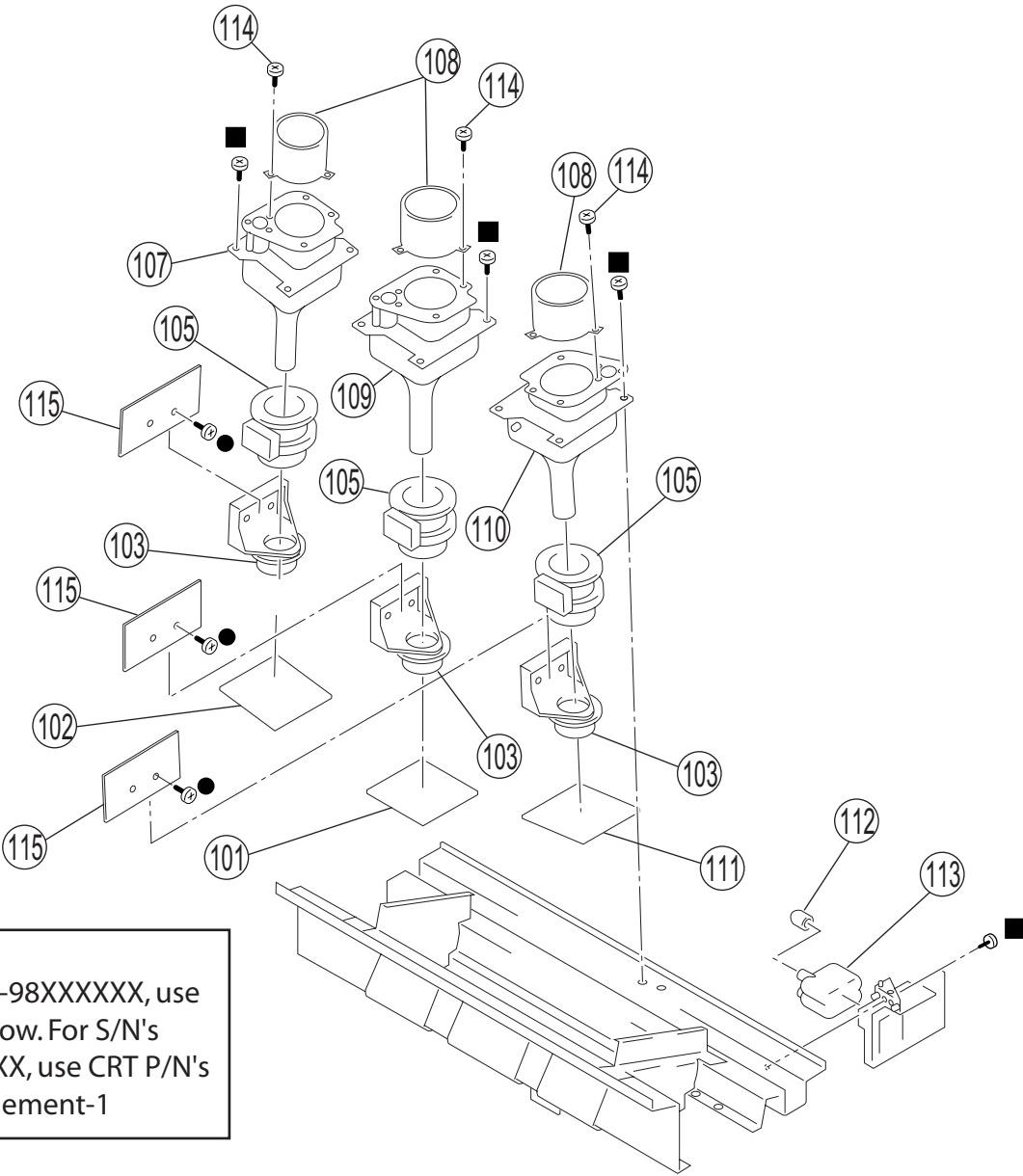
7-2. CHASSIS

- : +BVTP 3X12 7-685-648-79
- : +BVTP 4X12 7-685-661-14



7-3. PICTURE TUBE

: +BVTP 3X12 7-685-648-79
 : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK
101	* A-1332-241-A	CG BOARD, COMPLETE	
102	* A-1332-240-A	CR BOARD, COMPLETE	
△ 103	1-451-535-11	COIL ASSY, VM	
△ 105	1-451-537-11	DEFLECTION YOKE	
△ 107	A-1502-021-A	COUPLER (R) ASSY, CRT (57HW40)	
△	A-1502-023-A	COUPLER (R) ASSY, CRT (51HW40)	
108	4-083-750-01	LENS (DELTA 260)(57HW40)	
	4-083-751-01	LENS (DELTA 250)(51HW40)	
△ 109	A-1502-025-A	COUPLER (G) ASSY, CRT	
△ 110	A-1502-022-A	COUPLER (B) ASSY, CRT (57HW40)	
△	A-1502-024-A	COUPLER (B) ASSY, CRT (51HW40)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
111	* A-1332-242-A	CB BOARD, COMPLETE	
112	4-373-137-01	CAP (Z), RUBBER	
△ 113	8-598-955-31	BLOCK ASSY, HV HVB-1031	
114	4-052-894-01	SCREW (4X20), HEAD TAPPING	
115	* A-1342-598-A	V BOARD, COMPLETE	

SECTION 8

ELECTRICAL PARTS LIST

The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number,
please include the board name.

- The components identified by in \blacksquare this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
* A-1332-240-A CR BOARD, COMPLETE								

4-382-854-11 SCREW (M3X10), P, SW (+)								
* 7-651-000-50 GREASE,SILICON (G-746) 200G								
< CAPACITOR >								
C7101	1-164-156-11	CERAMIC CHIP	0.1UF	25V	L7101	1-469-555-21	INDUCTOR	10UH
C7102	1-101-003-00	CERAMIC	0.0047UF	50V	L7102	1-469-555-21	INDUCTOR	10UH
C7103	1-104-570-11	CERAMIC	0.001UF	10%	Q7101	8-729-026-49	2SA1037AK-T146-R	
C7104	1-107-662-11	ELECT	22UF	20%	Q7102	8-729-422-27	2SD601A-Q	
C7105	1-162-918-11	CERAMIC CHIP	18PF	5%	Q7103	8-729-048-50	2SK3018-T106	
< CONNECTOR >								
CN7102*	1-564-509-11	PLUG, CONNECTOR 6P			R7101	1-260-132-11	CARBON	560K
CN7103*	1-564-510-11	PLUG, CONNECTOR 7P			R7102	1-216-813-11	RES-CHIP	220
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH			R7103	1-218-693-11	METAL CHIP	1.1K
CN7105	1-695-915-11	TAB (CONTACT)			R7104	1-218-696-11	METAL CHIP	1.5K
CN7107	1-695-915-11	TAB (CONTACT)			R7105	1-219-743-11	CARBON	100
CN7108 \triangle 1-251-182-11 SOCKET, CRT								
< DIODE >								
D7101	8-719-404-50	MA111-TX			R7106	1-216-825-11	RES-CHIP	2.2K
D7101	8-719-988-61	ISS355TE-17			R7107	1-260-133-11	CARBON	680K
D7102	8-719-901-83	ISS83			R7108	1-218-692-11	METAL CHIP	1K
D7103	8-719-901-83	ISS83			R7109	1-216-815-11	RES-CHIP	330
< IC >								
IC7101	8-759-680-01	TDA6120Q/N2/S1			R7110	1-218-700-11	METAL CHIP	2.2K
< JUMPER RESISTOR >								
JC7101	1-216-864-11	SHORT	0		R7111	1-218-709-11	METAL CHIP	5.1K
< SPARK GAP >								
SG7101	1-519-422-11	GAP, SPARK			R7112	1-218-748-11	METAL CHIP	220K
SG7102	1-517-729-31	GAP, SPARK			R7113	1-218-748-11	METAL CHIP	220K
SG7103	1-519-421-11	GAP, DISCHARGE			R7114	1-215-925-11	METAL OXIDE	22K

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

CG

CB

REF. NO.	PART NO.	DESCRIPTION	REMARK		REF. NO.	PART NO.	DESCRIPTION	REMARK		
* A-1332-241-A CG BOARD, COMPLETE		*****		R7205	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	
*****				R7206	1-219-743-11	CARBON	100	5%	1/2W	
4-382-854-11 SCREW (M3X10), P, SW (+)				R7207	1-218-690-11	METAL CHIP	820	0.5%	1/16W	
* 7-651-000-50 GREASE,SILICON (G-746) 200G				R7208	1-260-133-11	CARBON	680K	5%	1/2W	
< CAPACITOR >				R7209	1-216-815-11	RES-CHIP	330	5%	1/16W	
				R7210	1-218-698-11	METAL CHIP	1.8K	0.5%	1/16W	
C7201	1-164-156-11	CERAMIC CHIP	0.1UF	25V	R7211	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
C7202	1-101-003-00	CERAMIC	0.0047UF	50V	R7212	1-218-746-11	METAL CHIP	180K	0.5%	1/16W
C7203	1-104-570-11	CERAMIC	0.001UF	10%	R7213	1-218-746-11	METAL CHIP	180K	0.5%	1/16W
C7204	1-107-662-11	ELECT	22UF	20%	R7214	1-215-925-11	METAL OXIDE	22K	5%	3W
C7205	1-162-920-11	CERAMIC CHIP	27PF	5%	R7216	1-216-823-11	RES-CHIP	1.5K	5%	1/16W
C7206	1-101-003-00	CERAMIC	0.0047UF	50V	R7217	1-260-099-11	CARBON	1K	5%	1/2W
C7207	1-126-768-11	ELECT	2200UF	20%	R7218	1-260-087-11	CARBON	100	5%	1/2W
C7208	1-164-156-11	CERAMIC CHIP	0.1UF	25V	R7219	1-260-093-11	CARBON	330	5%	1/2W
C7209	1-164-156-11	CERAMIC CHIP	0.1UF	25V	R7220	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W
C7210	1-126-933-11	ELECT	100UF	20%	< SPARK GAP >					
C7211	1-164-156-11	CERAMIC CHIP	0.1UF	25V	SG7201	1-519-422-11	GAP, SPARK			
C7212	1-161-830-00	CERAMIC	0.0047UF	500V	SG7202	1-517-729-31	GAP, SPARK			
C7213	1-101-003-00	CERAMIC	0.0047UF	50V	SG7203	1-519-421-11	GAP, DISCHARGE			
C7214	1-162-966-11	CERAMIC CHIP	0.0022UF	10%	*****					
C7215	1-164-156-11	CERAMIC CHIP	0.1UF	25V	* A-1332-242-A CB BOARD, COMPLETE					
< CONNECTOR >		*****								
CN7202*	1-564-509-11	PLUG, CONNECTOR 6P			4-382-854-11 SCREW (M3X10), P, SW (+)					
CN7203*	1-564-510-11	PLUG, CONNECTOR 7P			* 7-651-000-50 GREASE,SILICON (G-746) 200G					
CN7204*	1-564-510-11	PLUG, CONNECTOR 7P			< CAPACITOR >					
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH			C7301	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V
CN7206	1-695-915-11	TAB (CONTACT)			C7302	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
CN7208 1-695-915-11 TAB (CONTACT)				C7303	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
CN7209 Δ 1-251-182-11 SOCKET, CRT				C7304	1-101-003-00	CERAMIC	0.0047UF	50V		
< DIODE >				C7305	1-104-570-11	CERAMIC	0.001UF	10%	2KV	
D7201	8-719-988-61	ISS355TE-17			C7306	1-126-768-11	ELECT	2200UF	20%	16V
D7202	8-719-901-83	ISS83			C7308	1-107-662-11	ELECT	22UF	20%	250V
D7203	8-719-901-83	ISS83			C7309	1-101-003-00	CERAMIC	0.0047UF	0V	
< IC >				C7310	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
IC7201	8-759-680-01	TDA6120Q/N2/S1			C7311	1-164-156-11	CERAMIC CHIP	0.1UF		25V
< JUMPER RESISTOR >				C7312	1-126-933-11	ELECT	100UF	20%	16V	
JC7201	1-216-864-11	SHORT	0	C7313	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
< COIL >				C7314	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
L7201	1-469-555-21	INDUCTOR	10UH	C7315	1-161-830-00	CERAMIC	0.0047UF	500V		
L7202	1-469-555-21	INDUCTOR	10UH	C7316	1-101-003-00	CERAMIC	0.0047UF	50V		
< TRANSISTOR >				C7317	1-162-966-11	CERAMIC CHIP	0.0022UF	10%	50V	
Q7201	8-729-026-49	2SA1037AK-T146-R			< CONNECTOR >					
Q7202	8-729-422-27	2SD601A-Q			CN7302*	1-564-509-11	PLUG, CONNECTOR 6P			
Q7203	8-729-048-50	2SK3018-T106			CN7303*	1-564-510-11	PLUG, CONNECTOR 7P			
< RESISTOR >				CN7304*	1-564-510-11	PLUG, CONNECTOR 7P				
R7201	1-216-813-11	RES-CHIP	220	R7202	1-218-693-11	METAL CHIP	1.1K	0.5%	1/16W	
R7203	1-218-696-11	METAL CHIP	1.5K	R7204	1-260-132-11	CARBON	560K	0.5%	1/2W	
R7204	1-260-132-11	CARBON	560K	CN7308 1-695-915-11 TAB (CONTACT)						
CN7309 Δ 1-251-182-11 SOCKET, CRT										

CB**V**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
< DIODE >							
D7301	8-719-988-61	ISS355TE-17				* A-1342-598-A V BOARD, COMPLETE	
D7302	8-719-988-61	ISS355TE-17				*****	
D7303	8-719-901-83	ISS83					
D7304	8-719-901-83	ISS83					
< IC >							
IC7301	8-759-680-01	TDA6120Q/N2/S1				4-382-854-11 SCREW (M3X10), P, SW (+)	
< JUMPER RESISTOR >							
JC7301	1-216-864-11	SHORT	0				
< COIL >							
L7301	1-469-555-21	INDUCTOR	10UH				
L7302	1-469-555-21	INDUCTOR	10UH				
< TRANSISTOR >							
Q7301	8-729-026-49	2SA1037AK-T146-R					
Q7302	8-729-026-49	2SA1037AK-T146-R					
Q7303	8-729-422-27	2SD601A-Q					
Q7304	8-729-048-50	2SK3018-T106					
< RESISTOR >							
R7301	1-249-393-11	CARBON	10	5%	1/4W		
R7302	1-216-822-11	RES-CHIP	1.2K	5%	1/16W	< DIODE >	
R7303	1-216-813-11	RES-CHIP	220	5%	1/16W		
R7304	1-260-132-11	CARBON	560K	5%	1/2W	D9001	8-719-404-50 MA111-TX
R7305	1-216-817-11	RES-CHIP	470	5%	1/16W	D9002	8-719-404-50 MA111-TX
R7306	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	D9003	8-719-404-50 MA111-TX
R7307	1-219-743-11	CARBON	100	5%	1/2W	D9004	8-719-404-50 MA111-TX
R7308	1-216-809-11	RES-CHIP	100	5%	1/16W	D9005	8-719-510-02 D1NS4
R7310	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W	D9006	8-719-924-13 MTZJ-T-77-22B
R7311	1-218-694-11	METAL CHIP	1.2K	0.5%	1/16W	D9007	8-719-924-13 MTZJ-T-77-22B
R7312	1-260-133-11	CARBON	680K	5%	1/2W	< COIL >	
R7313	1-216-818-11	RES-CHIP	560	5%	1/16W	L9001	1-412-525-31 INDUCTOR 10UH
R7314	1-218-678-11	METAL CHIP	270	0.5%	1/16W	< TRANSISTOR >	
R7315	1-218-688-11	METAL CHIP	680	0.5%	1/16W		
R7316	1-218-693-11	METAL CHIP	1.1K	0.5%	1/16W		
R7317	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W	Q9002	8-729-422-27 2SD601A-Q
R7318	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	Q9003	8-729-422-27 2SD601A-Q
R7319	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	Q9004	8-729-026-49 2SA1037AK-T146-R
R7320	1-218-749-11	METAL CHIP	240K	0.5%	1/16W	Q9005	8-729-422-27 2SD601A-Q
R7321	1-218-749-11	METAL CHIP	240K	0.5%	1/16W	Q9006	8-729-026-49 2SA1037AK-T146-R
R7322	1-215-925-11	METAL OXIDE	22K	5%	3W	Q9007	8-729-422-27 2SD601A-Q
R7323	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	Q9008	8-729-045-04 2SC5511
R7324	1-260-328-11	CARBON	1K	5%	1/2W	Q9009	8-729-045-05 2SA2005
R7325	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	< RESISTOR >	
R7326	1-260-093-11	CARBON	330	5%	1/2W		
R7327	1-260-087-11	CARBON	100	5%	1/2W	R9002	1-216-805-11 RES-CHIP 47 5% 1/16W
< SPARK GAP >							
SG7301	1-519-422-11	GAP, SPARK				R9004	1-216-820-11 RES-CHIP 820 5% 1/16W
SG7302	1-517-729-31	GAP, SPARK				R9005	1-216-829-11 RES-CHIP 4.7K 5% 1/16W
SG7303	1-519-421-11	GAP, DISCHARGE				R9006	1-216-829-11 RES-CHIP 4.7K 5% 1/16W

						R9007	1-216-809-11 RES-CHIP 100 5% 1/16W
						R9008	1-216-803-11 RES-CHIP 33 5% 1/16W
						R9009	1-216-809-11 RES-CHIP 100 5% 1/16W
						R9010	1-216-813-11 RES-CHIP 220 5% 1/16W

V	B
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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
R9011	1-216-864-11	SHORT	0	C3318	1-164-156-11	CERAMIC CHIP	0.1UF 25V	
R9012	1-216-823-11	RES-CHIP	1.5K 5%	1/16W	C3319	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9013	1-216-805-11	RES-CHIP	47 5%	1/16W	C3320	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9014	1-216-805-11	RES-CHIP	47 5%	1/16W	C3321	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9015	1-216-833-11	RES-CHIP	10K 5%	1/16W	C3322	1-126-204-11	ELECT CHIP	47UF 20% 16V
R9016	1-249-414-11	CARBON	560 5%	1/4W	C3323	1-124-779-00	ELECT CHIP	10UF 20% 16V
R9017	1-249-435-11	CARBON	33K 5%	1/4W	C3324	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9018	1-249-435-11	CARBON	33K 5%	1/4W	C3325	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9019	1-249-414-11	CARBON	560 5%	1/4W	C3326	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9020	1-216-799-11	RES-CHIP	15 5%	1/16W	C3327	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9021	1-216-799-11	RES-CHIP	15 5%	1/16W	C3328	1-124-779-00	ELECT CHIP	10UF 20% 16V
R9022	1-249-421-11	CARBON	2.2K 5%	1/4W	C3329	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R9023	1-249-421-11	CARBON	2.2K 5%	1/4W	C3331	1-126-204-11	ELECT CHIP	47UF 20% 16V
R9024	1-249-405-11	CARBON	100 5%	1/4W	C3332	1-124-779-00	ELECT CHIP	10UF 20% 16V
R9025	1-249-385-11	CARBON	2.2 5%	1/4W	C3333	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9027	1-249-385-11	CARBON	2.2 5%	1/4W	C3334	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R9028	1-249-405-11	CARBON	100 5%	1/4W	C3335	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9029	1-215-913-11	METAL OXIDE	220 5%	3W	C3336	1-124-779-00	ELECT CHIP	10UF 20% 16V
R9030	1-249-377-11	CARBON	0.47 5%	1/4W	C3337	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R9031	1-249-385-11	CARBON	2.2 5%	1/4W	C3338	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9032	1-249-385-11	CARBON	2.2 5%	1/4W	C3339	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9033	1-249-436-11	CARBON	39K 5%	1/4W	C3340	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R9034	1-249-436-11	CARBON	39K 5%	1/4W	C3341	1-164-156-11	CERAMIC CHIP	0.1UF 25V
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* A-1136-218-A B BOARD, COMPLETE								

< CAPACITOR >								
C3001	1-128-453-21	ELECT CHIP	47UF 20%	6.3V	C3343	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3002	1-128-453-21	ELECT CHIP	47UF 20%	6.3V	C3344	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3003	1-128-453-21	ELECT CHIP	47UF 20%	6.3V	C3345	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3035	1-162-970-11	CERAMIC CHIP	0.01UF 10%	25V	C3346	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3044	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3347	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3089	1-162-970-11	CERAMIC CHIP	0.01UF 10%	25V	C3348	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3090	1-126-204-11	ELECT CHIP	47UF 20%	16V	C3349	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3096	1-162-970-11	CERAMIC CHIP	0.01UF 10%	25V	C3350	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3101	1-162-925-11	CERAMIC CHIP	68PF 5%	50V	C3351	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3102	1-162-925-11	CERAMIC CHIP	68PF 5%	50V	C3352	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3301	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3353	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3302	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3354	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3303	1-126-206-11	ELECT CHIP	100UF 20%	6.3V	C3355	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3304	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3356	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3305	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3357	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3306	1-126-204-11	ELECT CHIP	47UF 20%	16V	C3358	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3307	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3359	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3308	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3360	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3309	1-126-206-11	ELECT CHIP	100UF 20%	6.3V	C3361	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C3310	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3362	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V
C3311	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3363	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3312	1-126-206-11	ELECT CHIP	100UF 20%	6.3V	C3364	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3313	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3365	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3314	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3366	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3315	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3367	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3316	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3368	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3317	1-164-156-11	CERAMIC CHIP	0.1UF	25V	C3369	1-164-156-11	CERAMIC CHIP	0.1UF 25V
					C3370	1-164-156-11	CERAMIC CHIP	0.1UF 25V
					C3371	1-164-156-11	CERAMIC CHIP	0.1UF 25V
					C3372	1-164-156-11	CERAMIC CHIP	0.1UF 25V
					C3373	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V
					C3374	1-164-156-11	CERAMIC CHIP	0.1UF 25V
					C3375	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V
					C3376	1-164-156-11	CERAMIC CHIP	0.1UF 25V



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C3377	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3455	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3378	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3456	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3379	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3457	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3401	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3458	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3402	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3460	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
C3403	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3462	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3404	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3463	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3405	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3464	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3406	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3465	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3407	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3466	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3408	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3467	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3409	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3468	1-126-206-11	ELECT CHIP	100UF 20% 6.3V
C3410	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3469	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3411	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3470	1-126-206-11	ELECT CHIP	100UF 20% 6.3V
C3412	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3473	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3413	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3474	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3414	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3475	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3415	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3476	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3416	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3477	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3417	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3478	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3418	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3479	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3419	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3480	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3420	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3481	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3421	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3482	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3422	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3483	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3423	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3484	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V
C3424	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3485	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3425	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C3486	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3426	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3487	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3428	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3488	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3429	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3489	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3430	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3490	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3431	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3491	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3432	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3492	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3433	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3493	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3434	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3494	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3435	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3495	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3436	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3496	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3437	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3499	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C3438	1-164-156-11	CERAMIC CHIP	0.1UF 25V				< CONNECTOR >
C3439	1-164-156-11	CERAMIC CHIP	0.1UF 25V				CN3203* 1-793-923-11 CONNECTOR, DIN (PLUG) 64P
C3440	1-162-916-11	CERAMIC CHIP	12PF 5% 50V				< DIODE >
C3441	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	D3089	8-719-800-76	ISS226	
C3442	1-124-779-00	ELECT CHIP	10UF 20% 16V	D3090	8-719-800-76	ISS226	
C3443	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	D3301	8-719-083-58	UDZSTE-173.9B	
C3444	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D3302	8-719-069-60	UDZSTE-179.1B	
C3445	1-126-204-11	ELECT CHIP	47UF 20% 16V	D3401	8-719-914-43	DAN202K	
C3446	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	D3402	8-719-914-45	DAP202K	
C3447	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D3403	8-719-069-33	DTZ-TT11-6.8B	
C3448	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V				< FERRITE BEAD >
C3449	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB3302	1-500-451-11	FERRITE	0UH
C3450	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB3401	1-414-235-22	FERRITE	0UH
C3451	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB3402	1-414-235-22	FERRITE	0UH
C3452	1-164-156-11	CERAMIC CHIP	0.1UF 25V				
C3453	1-124-779-00	ELECT CHIP	10UF 20% 16V				
C3454	1-164-156-11	CERAMIC CHIP	0.1UF 25V				

B

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
< FILTER >											
FL3003	1-781-924-11	FILTER, LOW PASS (SMD)		L3409	1-469-555-21	INDUCTOR	10UH				
FL3301	1-234-558-21	FILTER, LOW PASS		L3410	1-412-058-11	INDUCTOR	10UH				
FL3302	1-234-557-21	FILTER, LOW PASS		L3411	1-412-058-11	INDUCTOR	10UH				
FL3303	1-234-557-21	FILTER, LOW PASS		L3412	1-469-555-21	INDUCTOR	10UH				
FL3401	1-781-923-11	FILTER, LOW PASS (SMD)		L3413	1-469-555-21	INDUCTOR	10UH				
< IC >											
IC3089	6-700-149-01	IC M24C04-MN6T(A)		L3414	1-469-555-21	INDUCTOR	10UH				
IC3090	8-759-832-08	IC MB94918RPF-G-134-BND		L3416	1-469-555-21	INDUCTOR	10UH				
IC3091	8-759-349-11	PST9145NL		< TRANSISTOR >							
IC3301	8-759-832-53	W981616AH-7-EL1		Q3005	8-729-422-27	2SD601A-Q					
IC3302	8-759-832-05	IC BA18BC0FP-E2		Q3006	8-729-422-27	2SD601A-Q					
IC3303	8-752-409-78	IC CXD2095AQ		Q3007	8-729-422-27	2SD601A-Q					
IC3304	8-759-447-90	TLC5733AIPM		Q3089	8-729-026-49	2SA1037AK-T146-R					
IC3305	8-759-669-75	TLC2932IPWR		Q3090	8-729-026-49	2SA1037AK-T146-R					
IC3306	8-759-669-78	TLC2933IPWR-12		Q3091	1-801-806-11	TR DTC144EKA					
IC3401	6-700-394-01	IC BA25BC0FP-E2		< COIL >							
IC3402	8-759-677-39	MB81F643242B-D		Q3301	8-729-422-27	2SD601A-Q					
IC3403	8-759-460-29	PST9120NL		Q3302	8-729-422-27	2SD601A-Q					
IC3404	8-759-669-75	TLC2932IPWR		Q3303	8-729-422-27	2SD601A-Q					
IC3405	8-759-453-97	TC7SET08FU(TE85L)		Q3304	8-729-422-27	2SD601A-Q					
IC3406	8-759-453-97	TC7SET08FU(TE85L)		Q3305	8-729-026-49	2SA1037AK-T146-R					
IC3407	8-759-453-97	TC7SET08FU(TE85L)		Q3306	8-729-026-49	2SA1037AK-T146-R					
IC3408	8-759-672-57	CXD9509AQ		Q3307	8-729-422-27	2SD601A-Q					
IC3409	8-759-833-72	IC NJM2870F25-TE2		Q3308	8-729-026-49	2SA1037AK-T146-R					
IC3410	8-752-367-59	CXD2309Q		Q3309	8-729-422-27	2SD601A-Q					
IC3411	8-759-082-57	TC7W04FU		Q3310	8-729-026-49	2SA1037AK-T146-R					
IC3412	8-759-082-58	TC7W08FU		Q3311	8-729-422-27	2SD601A-Q					
IC3413	8-759-595-97	SN74LV4053ANSR		Q3401	8-729-422-27	2SD601A-Q					
IC3414	8-759-548-56	M52055FP		Q3402	8-729-028-28	2SK2036(TE85L)					
< COIL >											
L3001	1-216-295-91	SHORT	0	Q3403	8-729-422-27	2SD601A-Q					
L3089	1-414-233-22	FERRITE	0UH	Q3404	8-729-028-28	2SK2036(TE85L)					
L3102	1-412-946-11	INDUCTOR	3.9UH	< RESISTOR >							
L3301	1-412-058-11	INDUCTOR	10UH	R3001	1-216-833-11	RES-CHIP	10K	5%	1/16W		
L3302	1-469-555-21	INDUCTOR	10UH	R3002	1-216-864-11	SHORT	0				
L3303	1-412-052-21	INDUCTOR	1UH	R3021	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3304	1-469-555-21	INDUCTOR	10UH	R3022	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3305	1-469-555-21	INDUCTOR	10UH	R3023	1-216-833-11	RES-CHIP	10K	5%	1/16W		
L3306	1-469-561-21	INDUCTOR	100UH	R3035	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3307	1-469-555-21	INDUCTOR	10UH	R3036	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3308	1-469-561-21	INDUCTOR	100UH	R3037	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3309	1-469-561-21	INDUCTOR	100UH	R3038	1-216-686-11	METAL CHIP	560	0.5%	1/16W		
L3310	1-469-561-21	INDUCTOR	100UH	R3039	1-218-686-11	METAL CHIP	560	0.5%	1/16W		
L3311	1-469-561-21	INDUCTOR	100UH	R3040	1-218-686-11	METAL CHIP	560	0.5%	1/16W		
L3312	1-469-555-21	INDUCTOR	10UH	R3050	1-216-809-11	RES-CHIP	100	5%	1/16W		
L3401	1-412-058-11	INDUCTOR	10UH	R3079	1-216-821-11	RES-CHIP	1K	5%	1/16W		
L3402	1-412-052-21	INDUCTOR	1UH	R3089	1-216-864-11	SHORT	0				
L3403	1-469-561-21	INDUCTOR	100UH								
L3404	1-469-561-21	INDUCTOR	100UH								
L3405	1-469-555-21	INDUCTOR	10UH								
L3406	1-469-555-21	INDUCTOR	10UH								
L3407	1-469-555-21	INDUCTOR	10UH								
L3408	1-469-555-21	INDUCTOR	10UH								

B

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R3091	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3340	1-216-855-11	RES-CHIP	680K 5% 1/16W
R3092	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3341	1-216-813-11	RES-CHIP	220 5% 1/16W
R3095	1-216-845-11	RES-CHIP	100K 5% 1/16W	R3342	1-218-705-11	METAL CHIP	3.6K 0.5% 1/16W
R3096	1-216-817-11	RES-CHIP	470 5% 1/16W	R3343	1-216-809-11	RES-CHIP	100 5% 1/16W
R3097	1-216-845-11	RES-CHIP	100K 5% 1/16W	R3344	1-216-853-11	RES-CHIP	470K 5% 1/16W
R3098	1-216-805-11	RES-CHIP	47 5% 1/16W	R3345	1-218-704-11	METAL CHIP	3.3K 0.5% 1/16W
R3099	1-216-805-11	RES-CHIP	47 5% 1/16W	R3346	1-216-809-11	RES-CHIP	100 5% 1/16W
R3100	1-216-809-11	RES-CHIP	100 5% 1/16W	R3347	1-216-815-11	RES-CHIP	330 5% 1/16W
R3101	1-216-809-11	RES-CHIP	100 5% 1/16W	R3348	1-216-864-11	SHORT	0
R3102	1-216-809-11	RES-CHIP	100 5% 1/16W	R3349	1-218-687-11	METAL CHIP	620 0.5% 1/16W
R3103	1-216-822-11	RES-CHIP	1.2K 5% 1/16W	R3350	1-216-814-11	RES-CHIP	270 5% 1/16W
R3104	1-216-809-11	RES-CHIP	100 5% 1/16W	R3351	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3105	1-216-809-11	RES-CHIP	100 5% 1/16W	R3352	1-216-853-11	RES-CHIP	470K 5% 1/16W
R3106	1-216-818-11	RES-CHIP	560 5% 1/16W	R3353	1-216-837-11	RES-CHIP	22K 5% 1/16W
R3107	1-216-864-11	SHORT	0	R3354	1-216-813-11	RES-CHIP	220 5% 1/16W
R3108	1-216-817-11	RES-CHIP	470 5% 1/16W	R3355	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3109	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R3356	1-216-819-11	RES-CHIP	680 5% 1/16W
R3110	1-216-809-11	RES-CHIP	100 5% 1/16W	R3357	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3111	1-216-809-11	RES-CHIP	100 5% 1/16W	R3358	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3301	1-216-809-11	RES-CHIP	100 5% 1/16W	R3359	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3302	1-216-817-11	RES-CHIP	470 5% 1/16W	R3360	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R3303	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W	R3361	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3304	1-216-809-11	RES-CHIP	100 5% 1/16W	R3364	1-216-864-11	SHORT	0
R3305	1-216-809-11	RES-CHIP	100 5% 1/16W	R3365	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R3306	1-216-809-11	RES-CHIP	100 5% 1/16W	R3366	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3307	1-216-864-11	SHORT	0	R3367	1-216-803-11	RES-CHIP	33 5% 1/16W
R3308	1-216-864-11	SHORT	0	R3369	1-216-864-11	SHORT	0
R3309	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3371	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3310	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3372	1-216-817-11	RES-CHIP	470 5% 1/16W
R3311	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3373	1-216-817-11	RES-CHIP	470 5% 1/16W
R3312	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3374	1-216-809-11	RES-CHIP	100 5% 1/16W
R3313	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3375	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3314	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R3376	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
R3315	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3377	1-216-817-11	RES-CHIP	470 5% 1/16W
R3316	1-218-664-11	METAL CHIP	68 0.5% 1/16W	R3378	1-216-817-11	RES-CHIP	470 5% 1/16W
R3317	1-218-664-11	METAL CHIP	68 0.5% 1/16W	R3379	1-216-809-11	RES-CHIP	100 5% 1/16W
R3318	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R3380	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3319	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3381	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
R3320	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3382	1-216-864-11	SHORT	0
R3321	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3383	1-216-817-11	RES-CHIP	470 5% 1/16W
R3322	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3410	1-216-833-11	RES-CHIP	10K 5% 1/16W
R3323	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3421	1-216-864-11	SHORT	0
R3324	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R3422	1-216-864-11	SHORT	0
R3325	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R3423	1-216-813-11	RES-CHIP	220 5% 1/16W
R3326	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3428	1-216-803-11	RES-CHIP	33 5% 1/16W
R3327	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3429	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
R3328	1-216-864-11	SHORT	0	R3432	1-216-815-11	RES-CHIP	330 5% 1/16W
R3329	1-216-815-11	RES-CHIP	330 5% 1/16W	R3434	1-216-809-11	RES-CHIP	100 5% 1/16W
R3330	1-216-815-11	RES-CHIP	330 5% 1/16W	R3445	1-216-864-11	SHORT	0
R3331	1-216-841-11	RES-CHIP	47K 5% 1/16W	R3446	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3332	1-218-709-11	METAL CHIP	5.1K 0.5% 1/16W	R3447	1-216-819-11	RES-CHIP	680 5% 1/16W
R3333	1-216-864-11	SHORT	0	R3448	1-216-855-11	RES-CHIP	680K 5% 1/16W
R3334	1-216-809-11	RES-CHIP	100 5% 1/16W	R3452	1-216-864-11	SHORT	0
R3335	1-216-833-11	RES-CHIP	10K 5% 1/16W	R3454	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3337	1-216-820-11	RES-CHIP	820 5% 1/16W	R3460	1-216-833-11	RES-CHIP	10K 5% 1/16W
R3338	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3461	1-216-833-11	RES-CHIP	10K 5% 1/16W
R3339	1-216-855-11	RES-CHIP	680K 5% 1/16W	R3464	1-216-821-11	RES-CHIP	1K 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R3465	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3824	1-216-826-11	RES-CHIP	2.7K 5% 1/16W
R3467	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3825	1-216-826-11	RES-CHIP	2.7K 5% 1/16W
R3470	1-216-809-11	RES-CHIP	100 5% 1/16W	R3826	1-216-809-11	RES-CHIP	100 5% 1/16W
R3471	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3828	1-218-684-11	METAL CHIP	470 0.5% 1/16W
R3472	1-216-801-11	RES-CHIP	22 5% 1/16W	R3829	1-218-684-11	METAL CHIP	470 0.5% 1/16W
R3475	1-216-809-11	RES-CHIP	100 5% 1/16W	R3830	1-218-684-11	METAL CHIP	470 0.5% 1/16W
R3476	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3831	1-216-864-11	SHORT	0
R3477	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W	R3832	1-216-864-11	SHORT	0
R3478	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3833	1-216-864-11	SHORT	0
R3483	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W	R3834	1-218-678-11	METAL CHIP	270 0.5% 1/16W
R3484	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3835	1-218-678-11	METAL CHIP	270 0.5% 1/16W
R3485	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3836	1-218-678-11	METAL CHIP	270 0.5% 1/16W
R3486	1-216-801-11	RES-CHIP	22 5% 1/16W	R3837	1-218-678-11	METAL CHIP	270 0.5% 1/16W
R3489	1-216-864-11	SHORT	0	R3838	1-218-678-11	METAL CHIP	270 0.5% 1/16W
R3490	1-216-864-11	SHORT	0	R3839	1-218-670-11	METAL CHIP	120 0.5% 1/16W
R3491	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3840	1-216-803-11	RES-CHIP	33 5% 1/16W
R3492	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3841	1-218-670-11	METAL CHIP	120 0.5% 1/16W
R3493	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W	R3842	1-218-689-11	METAL CHIP	750 0.5% 1/16W
R3495	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3846	1-216-801-11	RES-CHIP	22 5% 1/16W
R3496	1-216-801-11	RES-CHIP	22 5% 1/16W	R3847	1-216-801-11	RES-CHIP	22 5% 1/16W
R3497	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R3848	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3498	1-216-818-11	RES-CHIP	560 5% 1/16W	R3849	1-218-675-11	METAL CHIP	200 0.5% 1/16W
R3499	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3850	1-218-675-11	METAL CHIP	200 0.5% 1/16W
R3501	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3851	1-216-809-11	RES-CHIP	100 5% 1/16W
R3502	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3852	1-218-675-11	METAL CHIP	200 0.5% 1/16W
R3503	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3854	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3504	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3857	1-216-809-11	RES-CHIP	100 5% 1/16W
R3505	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3858	1-218-704-11	METAL CHIP	3.3K 0.5% 1/16W
R3506	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3862	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3507	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3863	1-218-700-11	METAL CHIP	2.2K 0.5% 1/16W
R3508	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3864	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R3509	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3865	1-216-809-11	RES-CHIP	100 5% 1/16W
R3510	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3866	1-414-234-22	FERRITE	0UH
R3511	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3867	1-414-234-22	FERRITE	0UH
R3512	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3868	1-414-234-22	FERRITE	0UH
R3800	1-216-864-11	SHORT	0	R3869	1-218-719-11	METAL CHIP	13K 0.5% 1/16W
R3802	1-218-678-11	METAL CHIP	270 0.5% 1/16W	R3870	1-218-719-11	METAL CHIP	13K 0.5% 1/16W
R3803	1-218-678-11	METAL CHIP	270 0.5% 1/16W	R3871	1-218-719-11	METAL CHIP	13K 0.5% 1/16W
R3804	1-218-678-11	METAL CHIP	270 0.5% 1/16W	R3881	1-216-807-11	RES-CHIP	68 5% 1/16W
R3805	1-218-678-11	METAL CHIP	270 0.5% 1/16W	R3882	1-216-807-11	RES-CHIP	68 5% 1/16W
R3806	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3883	1-216-807-11	RES-CHIP	68 5% 1/16W
R3807	1-218-670-11	METAL CHIP	120 0.5% 1/16W	R3915	1-218-644-11	METAL CHIP	10 0.5% 1/16W
R3808	1-218-670-11	METAL CHIP	120 0.5% 1/16W	R3916	1-218-644-11	METAL CHIP	10 0.5% 1/16W
R3809	1-218-670-11	METAL CHIP	120 0.5% 1/16W	R3917	1-218-644-11	METAL CHIP	10 0.5% 1/16W
R3810	1-218-670-11	METAL CHIP	120 0.5% 1/16W	R3923	1-412-363-21	FERRITE	0UH
R3811	1-216-809-11	RES-CHIP	100 5% 1/16W	R3933	1-216-864-11	SHORT	0
R3812	1-216-809-11	RES-CHIP	100 5% 1/16W	R3937	1-216-809-11	RES-CHIP	100 5% 1/16W
R3813	1-216-809-11	RES-CHIP	100 5% 1/16W	R3953	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3814	1-218-644-11	METAL CHIP	10 0.5% 1/16W	R3954	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3815	1-218-648-11	METAL CHIP	15 0.5% 1/16W	R3955	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3816	1-218-652-11	METAL CHIP	22 0.5% 1/16W	R3956	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3817	1-218-652-11	METAL CHIP	22 0.5% 1/16W	R3957	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3820	1-218-684-11	METAL CHIP	470 0.5% 1/16W	R3958	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3821	1-218-684-11	METAL CHIP	470 0.5% 1/16W				< NETWORK RESISTOR >
R3822	1-218-684-11	METAL CHIP	470 0.5% 1/16W				
R3823	1-216-826-11	RES-CHIP	2.7K 5% 1/16W	RB3304	1-234-525-21	RES, CHIP NETWORK	56
				RB3305	1-234-525-21	RES, CHIP NETWORK	56

B**U**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
RB3306	1-234-525-21	RES, CHIP NETWORK 56		C2029	1-126-964-11	ELECT	10UF 20% 50V
RB3307	1-234-525-21	RES, CHIP NETWORK 56		C2030	1-126-964-11	ELECT	10UF 20% 50V
RB3401	1-234-524-21	RES, CHIP NETWORK 33		C2031	1-126-964-11	ELECT	10UF 20% 50V
RB3402	1-234-524-21	RES, CHIP NETWORK 33		C2032	1-126-964-11	ELECT	10UF 20% 50V
RB3403	1-234-524-21	RES, CHIP NETWORK 33		C2033	1-126-960-11	ELECT	1UF 20% 50V
RB3404	1-234-524-21	RES, CHIP NETWORK 33		C2036	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3405	1-234-524-21	RES, CHIP NETWORK 33		C2037	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V
RB3406	1-234-524-21	RES, CHIP NETWORK 33		C2038	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
RB3407	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2040	1-126-933-11	ELECT	100UF 20% 16V
RB3408	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2043	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3409	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2044	1-126-933-11	ELECT	100UF 20% 16
RB3410	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2045	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3411	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2046	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3412	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2048	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3421	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2050	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3422	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2052	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3423	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2055	1-126-964-11	ELECT	10UF 20% 50V
RB3424	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2056	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3425	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2060	1-126-933-11	ELECT	100UF 20% 16V
RB3426	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2061	1-126-964-11	ELECT	10UF 20% 50V
RB3427	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2062	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
RB3428	1-239-409-11	RES, CHIP NETWORK 47 (3216)		C2069	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
< VIBRATOR >							
X3089	1-781-945-21	VIBRATOR, CERAMIC		C2083	1-128-551-11	ELECT	22UF 20% 25V
X3401	1-781-887-21	VIBRATOR, CRYSTAL		C2084	1-126-964-11	ELECT	10UF 20% 50V
X3402	1-781-579-21	OSCILLATOR, CRYSTAL		C2085	1-162-917-11	CERAMIC CHIP	15PF 5% 50V

* A-1373-851-A U BOARD, COMPLETE							

< CAPACITOR >							
C2001	1-163-021-91	CERAMIC CHIP	0.01UF	C2094	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C2002	1-163-021-91	CERAMIC CHIP	0.01UF	C2096	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C2003	1-126-935-11	ELECT	470UF	C2097	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C2004	1-128-551-11	ELECT	22UF	C2098	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2005	1-107-826-11	CERAMIC CHIP	0.1UF	C2099	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2006	1-107-826-11	CERAMIC CHIP	0.1UF	C2102	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2007	1-126-964-11	ELECT	10UF	C2103	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2008	1-126-964-11	ELECT	10UF	C2111	1-126-964-11	ELECT	10UF 20% 50V
C2012	1-126-964-11	ELECT	10UF	C2112	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2013	1-126-964-11	ELECT	10UF	C2113	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2014	1-126-960-11	ELECT	1UF	C2114	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2015	1-126-960-11	ELECT	1UF	C2122	1-126-964-11	ELECT	10UF 20% 50V
C2016	1-126-964-11	ELECT	10UF	C2128	1-126-964-11	ELECT	10UF 20% 50V
C2017	1-126-964-11	ELECT	10UF	C2301	1-130-495-00	MYLAR	0.1UF 5% 50V
C2018	1-126-960-11	ELECT	1UF	C2302	1-130-495-00	MYLAR	0.1UF 5% 50V
C2019	1-126-964-11	ELECT	10UF	C2303	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
C2020	1-126-964-11	ELECT	10UF	C2304	1-128-551-11	ELECT	22UF 20% 25V
C2021	1-126-960-11	ELECT	1UF	C2305	1-130-495-00	MYLAR	0.1UF 5% 50V
C2022	1-126-960-11	ELECT	1UF	C2307	1-136-357-11	MYLAR	680PF 5% 50V
C2023	1-126-964-11	ELECT	10UF	C2308	1-136-357-11	MYLAR	680PF 5% 50V
C2024	1-126-964-11	ELECT	10UF	C2309	1-128-551-11	ELECT	22UF 20% 25V
C2025	1-126-960-11	ELECT	1UF	C2310	1-126-947-11	ELECT	47UF 20% 25V
C2026	1-126-960-11	ELECT	1UF	C2311	1-126-947-11	ELECT	47UF 20% 25V
C2027	1-128-551-11	ELECT	22UF	C2312	1-126-947-11	ELECT	47UF 20% 25V
C2028	1-126-933-11	ELECT	100UF	C2313	1-130-495-00	MYLAR	0.1UF 5% 50V
				C2314	1-137-372-11	MYLAR	0.022UF 5% 50V





REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC2302	8-759-578-49	NJM2370U10-TE2		R2014	1-216-853-11	RES-CHIP	470K 5% 1/16W
IC2305	8-759-686-15	NJM2180M		R2015	1-216-853-11	RES-CHIP	470K 5% 1/16W
< JACK >							
J2001	1-573-967-12	BLOCK, (S) TERMINAL		R2016	1-216-853-11	RES-CHIP	470K 5% 1/16W
J2002	1-764-143-11	JACK		R2017	1-218-665-11	METAL CHIP	75 0.5% 1/16W
J2003	1-764-143-11	JACK		R2018	1-216-853-11	RES-CHIP	470K 5% 1/16W
J2004	1-750-517-21	JACK BLOCK, PIN 3P		R2019	1-216-853-11	RES-CHIP	470K 5% 1/16W
J2005	1-815-015-11	JACK BLOCK, PIN		R2020	1-218-665-11	METAL CHIP	75 0.5% 1/16W
J2006	1-815-015-11	JACK BLOCK, PIN		R2021	1-218-665-11	METAL CHIP	75 0.5% 1/16W
J2007	1-750-516-21	JACK BLOCK, PIN 2P		R2022	1-218-665-11	METAL CHIP	75 0.5% 1/16W
J2008	1-750-517-21	JACK BLOCK, PIN 3P		R2023	1-216-853-11	RES-CHIP	470K 5% 1/16W
< COIL >							
L2301	1-469-555-21	INDUCTOR	10UH	R2024	1-216-853-11	RES-CHIP	470K 5% 1/16W
L2302	1-469-555-21	INDUCTOR	10UH	R2025	1-218-665-11	METAL CHIP	75 0.5% 1/16W
< TRANSISTOR >							
Q2001	8-729-422-27	2SD601A-Q		R2026	1-218-665-11	METAL CHIP	75 0.5% 1/16W
Q2002	8-729-026-49	2SA1037AK-T146-R		R2027	1-218-665-11	METAL CHIP	75 0.5% 1/16W
Q2003	8-729-026-49	2SA1037AK-T146-R		R2028	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2004	8-729-422-27	2SD601A-Q		R2029	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2005	8-729-422-27	2SD601A-Q		R2030	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2006	8-729-422-27	2SD601A-Q		R2031	1-216-841-11	RES-CHIP	47K 5% 1/16W
Q2007	8-729-422-27	2SD601A-Q		R2032	1-216-845-11	RES-CHIP	100K 5% 1/16W
Q2008	8-729-422-27	2SD601A-Q		R2034	1-216-803-11	RES-CHIP	33 5% 1/16W
Q2009	8-729-422-27	2SD601A-Q		R2035	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2012	8-729-026-49	2SA1037AK-T146-R		R2036	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2013	8-729-422-27	2SD601A-Q		R2037	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2015	8-729-422-27	2SD601A-Q		R2038	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2016	8-729-422-27	2SD601A-Q		R2039	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q2017	8-729-422-27	2SD601A-Q		R2040	1-216-857-11	RES-CHIP	1M 5% 1/16W
Q2019	8-729-026-49	2SA1037AK-T146-R		R2041	1-216-842-11	RES-CHIP	56K 5% 1/16W
Q2020	8-729-422-27	2SD601A-Q		R2042	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
Q2021	8-729-026-49	2SA1037AK-T146-R		R2043	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2022	8-729-422-27	2SD601A-Q		R2044	1-216-806-11	RES-CHIP	56 5% 1/16W
Q2024	8-729-422-27	2SD601A-Q		R2045	1-216-806-11	RES-CHIP	56 5% 1/16W
Q2025	8-729-422-27	2SD601A-Q		R2046	1-216-818-11	RES-CHIP	560 5% 1/16W
Q2026	8-729-026-49	2SA1037AK-T146-R		R2047	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2027	8-729-026-49	2SA1037AK-T146-R		R2048	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q2028	8-729-026-49	2SA1037AK-T146-R		R2049	1-216-809-11	RES-CHIP	100 5% 1/16W
Q2029	8-729-120-28	2SC1623-L5L6		R2050	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
< RESISTOR >							
R2001	1-218-285-11	RES-CHIP	75 5% 1/16W	R2051	1-216-809-11	RES-CHIP	100 5% 1/16W
R2002	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2052	1-216-817-11	RES-CHIP	470 5% 1/16W
R2003	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2053	1-216-817-11	RES-CHIP	470 5% 1/16W
R2004	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2054	1-216-806-11	RES-CHIP	56 5% 1/16W
R2005	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2055	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2006	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2056	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2007	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2057	1-216-806-11	RES-CHIP	56 5% 1/16W
R2008	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2058	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R2009	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2059	1-216-817-11	RES-CHIP	470 5% 1/16W
R2010	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2060	1-216-817-11	RES-CHIP	470 5% 1/16W
R2011	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2061	1-216-817-11	RES-CHIP	470 5% 1/16W
R2012	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2062	1-216-817-11	RES-CHIP	470 5% 1/16W
R2013	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2063	1-216-809-11	RES-CHIP	100 5% 1/16W
				R2064	1-216-809-11	RES-CHIP	100 5% 1/16W
				R2065	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
				R2066	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R2067	1-216-809-11	RES-CHIP	100 5% 1/16W
				R2068	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
				R2069	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
				R2070	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
				R2071	1-216-809-11	RES-CHIP	100 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
R2072	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R2164	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W
R2073	1-216-809-11	RES-CHIP	100	5%	1/16W	R2166	1-216-818-11	RES-CHIP	560	5%	1/16W
R2074	1-216-809-11	RES-CHIP	100	5%	1/16W	R2169	1-216-842-11	RES-CHIP	56K	5%	1/16W
R2075	1-216-809-11	RES-CHIP	100	5%	1/16W	R2173	1-216-818-11	RES-CHIP	560	5%	1/16W
R2077	1-216-809-11	RES-CHIP	100	5%	1/16W	R2174	1-218-686-11	METAL CHIP	560	0.5%	1/16W
R2080	1-216-809-11	RES-CHIP	100	5%	1/16W	R2175	1-216-817-11	RES-CHIP	470	5%	1/16W
R2081	1-216-809-11	RES-CHIP	100	5%	1/16W	R2176	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R2082	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R2177	1-216-809-11	RES-CHIP	100	5%	1/16W
R2084	1-216-809-11	RES-CHIP	100	5%	1/16W	R2178	1-218-676-11	METAL CHIP	220	0.5%	1/16W
R2085	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2182	1-216-864-11	SHORT	0		
R2086	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R2183	1-216-813-11	RES-CHIP	220	5%	1/16W
R2087	1-216-809-11	RES-CHIP	100	5%	1/16W	R2184	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R2089	1-216-809-11	RES-CHIP	100	5%	1/16W	R2185	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R2090	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2186	1-218-688-11	METAL CHIP	680	0.5%	1/16W
R2091	1-216-806-11	RES-CHIP	56	5%	1/16W	R2187	1-216-864-11	SHORT	0		
R2092	1-216-806-11	RES-CHIP	56	5%	1/16W	R2193	1-216-809-11	RES-CHIP	100	5%	1/16W
R2094	1-216-864-11	SHORT	0			R2194	1-216-817-11	RES-CHIP	470	5%	1/16W
R2096	1-216-809-11	RES-CHIP	100	5%	1/16W	R2195	1-216-817-11	RES-CHIP	470	5%	1/16W
R2097	1-216-809-11	RES-CHIP	100	5%	1/16W	R2196	1-216-817-11	RES-CHIP	470	5%	1/16W
R2098	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2197	1-216-817-11	RES-CHIP	470	5%	1/16W
R2099	1-216-809-11	RES-CHIP	100	5%	1/16W	R2198	1-216-853-11	RES-CHIP	470K	5%	1/16W
R2100	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2199	1-216-853-11	RES-CHIP	470K	5%	1/16W
R2103	1-216-809-11	RES-CHIP	100	5%	1/16W	R2301	1-216-851-11	RES-CHIP	330K	5%	1/16W
R2104	1-216-809-11	RES-CHIP	100	5%	1/16W	R2302	1-216-835-11	RES-CHIP	15K	5%	1/16W
R2105	1-216-809-11	RES-CHIP	100	5%	1/16W	R2303	1-216-835-11	RES-CHIP	15K	5%	1/16W
R2107	1-216-807-11	RES-CHIP	68	5%	1/16W	R2304	1-216-861-11	RES-CHIP	2.2M	5%	1/16W
R2109	1-216-809-11	RES-CHIP	100	5%	1/16W	R2305	1-216-845-11	RES-CHIP	100K	5%	1/16W
R2110	1-216-809-11	RES-CHIP	100	5%	1/16W	R2306	1-216-861-11	RES-CHIP	2.2M	5%	1/16W
R2111	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2307	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R2113	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2308	1-216-841-11	RES-CHIP	47K	5%	1/16W
R2116	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	R2309	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R2118	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2310	1-216-841-11	RES-CHIP	47K	5%	1/16W
R2121	1-216-809-11	RES-CHIP	100	5%	1/16W	R2311	1-216-837-11	RES-CHIP	22K	5%	1/16W
R2122	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2312	1-216-837-11	RES-CHIP	22K	5%	1/16W
R2123	1-218-684-11	METAL CHIP	470	0.5%	1/16W	R2313	1-216-832-11	RES-CHIP	8.2K	5%	1/16W
R2124	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2314	1-216-832-11	RES-CHIP	8.2K	5%	1/16W
R2125	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W	R2316	1-216-841-11	RES-CHIP	47K	5%	1/16W
R2128	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2317	1-216-845-11	RES-CHIP	100K	5%	1/16W
R2130	1-216-809-11	RES-CHIP	100	5%	1/16W	R2318	1-216-809-11	RES-CHIP	100	5%	1/16W
R2131	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2319	1-216-841-11	RES-CHIP	47K	5%	1/16W
R2132	1-216-833-11	RES-CHIP	10K	5%	1/16W	R2320	1-216-809-11	RES-CHIP	100	5%	1/16W
R2133	1-218-674-11	METAL CHIP	180	0.5%	1/16W	R2321	1-216-833-11	RES-CHIP	10K	5%	1/16W
R2136	1-216-816-11	RES-CHIP	390	5%	1/16W	R2322	1-216-835-11	RES-CHIP	15K	5%	1/16W
R2137	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	R2323	1-216-857-11	RES-CHIP	1M	5%	1/16W
R2138	1-216-809-11	RES-CHIP	100	5%	1/16W	R2326	1-216-864-11	SHORT	0		
R2142	1-216-815-11	RES-CHIP	330	5%	1/16W	R2327	1-216-864-11	SHORT	0		
R2147	1-216-814-11	RES-CHIP	270	5%	1/16W	R2328	1-216-833-11	RES-CHIP	10K	5%	1/16W
R2148	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W	R2329	1-216-851-11	RES-CHIP	330K	5%	1/16W
R2149	1-216-817-11	RES-CHIP	470	5%	1/16W	R2332	1-216-837-11	RES-CHIP	22K	5%	1/16W
R2150	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2333	1-216-836-11	RES-CHIP	18K	5%	1/16W
R2151	1-218-698-11	METAL CHIP	1.8K	0.5%	1/16W	R2334	1-216-833-11	RES-CHIP	10K	5%	1/16W
R2152	1-218-694-11	METAL CHIP	1.2K	0.5%	1/16W	R2335	1-216-835-11	RES-CHIP	15K	5%	1/16W
R2153	1-216-821-11	RES-CHIP	1K	5%	1/16W	R2336	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R2155	1-216-837-11	RES-CHIP	22K	5%	1/16W	R2337	1-216-833-11	RES-CHIP	10K	5%	1/16W
R2156	1-216-841-11	RES-CHIP	47K	5%	1/16W	R2338	1-216-835-11	RES-CHIP	15K	5%	1/16W
R2157	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R2340	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R2159	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	R2341	1-216-864-11	SHORT	0		

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2343	1-216-864-11	SHORT	0	C1631	1-126-933-11	ELECT	100UF 20% 16V
R2353	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	C1632	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2354	1-216-841-11	RES-CHIP	47K 5% 1/16W	C1633	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2355	1-218-890-11	RES-CHIP	62K 5% 1/16W	C1634	1-126-963-11	ELECT	4.7UF 20% 50V
R2356	1-216-842-11	RES-CHIP	56K 5% 1/16W	C1635	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
R2357	1-216-833-11	RES-CHIP	10K 5% 1/16W	C1636	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R2358	1-216-839-11	RES-CHIP	33K 5% 1/16W	C1637	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
R2359	1-216-824-11	RES-CHIP	1.8K 5% 1/16W	C1638	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
R2360	1-216-861-11	RES-CHIP	2.2M 5% 1/16W	C1639	1-126-933-11	ELECT	100UF 20% 16V
R2365	1-216-833-11	RES-CHIP	10K 5% 1/16W	C1640	1-126-933-11	ELECT	100UF 20% 16V
R2366	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	C1641	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2374	1-216-864-11	SHORT	0	C1643	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2376	1-216-864-11	SHORT	0	C1644	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2377	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	C1645	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
R2379	1-216-842-11	RES-CHIP	56K 5% 1/16W	C1646	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
R2380	1-216-821-11	RES-CHIP	1K 5% 1/16W	C1647	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
R2384	1-216-833-11	RES-CHIP	10K 5% 1/16W	C1649	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
R2385	1-216-835-11	RES-CHIP	15K 5% 1/16W	C1651	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2386	1-216-837-11	RES-CHIP	22K 5% 1/16W	C1652	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2387	1-216-821-11	RES-CHIP	1K 5% 1/16W	C1655	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2389	1-216-864-11	SHORT	0	C1657	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2390	1-216-847-11	RES-CHIP	150K 5% 1/16W	C1658	1-164-156-11	CERAMIC CHIP	0.1UF 25V

* A-1299-523-A AD BOARD, COMPLETE

< CAPACITOR >

C1601	1-126-933-11	ELECT	100UF 20% 16V	C1666	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1604	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1668	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1605	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1669	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V
C1606	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1670	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1607	1-126-933-11	ELECT	100UF 20% 16V	C1671	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1608	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1672	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1609	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	C1673	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V
C1610	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C1674	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C1611	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1675	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C1612	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1676	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C1613	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1677	1-126-933-11	ELECT	100UF 20% 16V
C1614	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1678	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C1615	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1680	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1616	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1681	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1617	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1682	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1618	1-126-933-11	ELECT	100UF 20% 16V	C1683	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1619	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1684	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1620	1-162-920-11	CERAMIC CHIP	27PF 5% 50V	C1685	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1621	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1688	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1622	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C1690	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1623	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V	C1691	1-126-933-11	ELECT	100UF 20% 16V
C1624	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V	C1692	1-126-933-11	ELECT	100UF 20% 16V
C1625	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1693	1-126-933-11	ELECT	100UF 20% 16V
C1626	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1694	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1627	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1695	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V
C1628	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1696	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V
C1629	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1697	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1630	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1698	1-164-156-11	CERAMIC CHIP	0.1UF 25V

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C1699	1-164-156-11	CERAMIC CHIP	0.1UF 25V			< IC >	
C1700	1-164-156-11	CERAMIC CHIP	0.1UF 25V				
C1701	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V	IC1601	8-759-683-55	IC CM0017AF	
C1704	1-126-933-11	ELECT	100UF 20% 16V	IC1602	8-759-830-08	IC NJM2068V-TE2	
C1707	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	IC1603	8-759-830-08	IC NJM2068V-TE2	
C1708	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	IC1605	8-759-352-91	PST9143NL	
C1709	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	IC1606	8-752-925-71	IC CXP86448-635Q	
C1711	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	IC1607	8-759-682-41	M24C32-WMN6T(A)	
C1712	1-164-156-11	CERAMIC CHIP	0.1UF 25V	IC1608	8-759-829-87	IC CD0031AM	
C1714	1-164-156-11	CERAMIC CHIP	0.1UF 25V	IC1609	8-759-830-08	IC NJM2068V-TE2	
C1715	1-164-156-11	CERAMIC CHIP	0.1UF 25V	IC1610	8-759-830-08	IC NJM2068V-TE2	
C1717	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	IC1611	8-759-830-08	IC NJM2068V-TE2	
C1718	1-164-156-11	CERAMIC CHIP	0.1UF 25V	IC1612	8-759-830-08	IC NJM2068V-TE2	
C1720	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V			< COIL >	
C1721	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	L1601	1-469-555-21	INDUCTOR	10UH
C1722	1-162-910-11	CERAMIC CHIP	5PF 0.25PF50V	L1602	1-469-555-21	INDUCTOR	10UH
C1730	1-126-916-11	ELECT	1000UF 20% 6.3V				
C1731	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V			< TRANSISTOR >	
C1732	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	Q1603	8-729-422-27	2SD601A-Q	
C1733	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	Q1604	8-729-422-27	2SD601A-Q	
C1734	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	Q1605	8-729-422-27	2SD601A-Q	
				Q1606	8-729-422-27	2SD601A-Q	
						< RESISTOR >	
CN1601	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P		R1600	1-216-833-11	RES-CHIP	10K 5% 1/16W
CN1602	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P		R1601	1-216-841-11	RES-CHIP	47K 5% 1/16W
				R1604	1-216-833-11	RES-CHIP	10K 5% 1/16W
				R1605	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1606	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1607	1-216-821-11	RES-CHIP	1K 5% 1/16W
D1601	8-719-404-50	MA111-TX		R1608	1-216-809-11	RES-CHIP	100 5% 1/16W
D1603	8-719-404-50	MA111-TX		R1609	1-216-809-11	RES-CHIP	100 5% 1/16W
D1604	8-719-069-54	UDZSTE-175.1B		R1611	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
D1605	8-719-069-54	UDZSTE-175.1B		R1614	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
D1606	8-719-069-54	UDZSTE-175.1B		R1615	1-216-821-11	RES-CHIP	1K 5% 1/16W
D1607	8-719-069-54	UDZSTE-175.1B		R1618	1-216-809-11	RES-CHIP	100 5% 1/16W
D1691	8-719-404-50	MA111-TX		R1619	1-216-864-11	SHORT	0
D1692	8-719-404-50	MA111-TX		R1620	1-216-809-11	RES-CHIP	100 5% 1/16W
D1693	8-719-404-50	MA111-TX		R1621	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1622	1-216-817-11	RES-CHIP	470 5% 1/16W
				R1623	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1625	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1627	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R1634	1-216-809-11	RES-CHIP	100 5% 1/16W
FB1601	1-414-445-11	FERRITE	0UH	R1635	1-216-809-11	RES-CHIP	100 5% 1/16W
FB1602	1-414-445-11	FERRITE	0UH	R1636	1-216-833-11	RES-CHIP	10K 5% 1/16W
FB1603	1-414-445-11	FERRITE	0UH	R1637	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB1604	1-414-445-11	FERRITE	0UH	R1638	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB1605	1-414-445-11	FERRITE	0UH	R1639	1-216-809-11	RES-CHIP	100 5% 1/16W
FB1606	1-414-445-11	FERRITE	0UH	R1640	1-216-837-11	RES-CHIP	22K 5% 1/16W
FB1607	1-414-445-11	FERRITE	0UH	R1641	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
FB1608	1-414-445-11	FERRITE	0UH	R1642	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB1609	1-414-445-11	FERRITE	0UH	R1643	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB1610	1-414-445-11	FERRITE	0UH	R1644	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
FB1611	1-414-445-11	FERRITE	0UH	R1645	1-216-815-11	RES-CHIP	330 5% 1/16W
FB1612	1-414-445-11	FERRITE	0UH	R1646	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
FB1613	1-414-445-11	FERRITE	0UH				
FB1614	1-414-445-11	FERRITE	0UH				
FB1615	1-414-445-11	FERRITE	0UH				
FB1616	1-414-445-11	FERRITE	0UH				
FB1617	1-414-445-11	FERRITE	0UH				

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REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK			
R1647	1-216-833-11	RES-CHIP	10K	5%	1/16W	R1713	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R1648	1-216-809-11	RES-CHIP	100	5%	1/16W	R1714	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R1649	1-216-809-11	RES-CHIP	100	5%	1/16W							
R1650	1-216-815-11	RES-CHIP	330	5%	1/16W						< NETWORK RESISTOR >	
R1651	1-216-815-11	RES-CHIP	330	5%	1/16W	RB1603	1-233-576-11	RES, CHIP NETWORK 100				
R1652	1-216-821-11	RES-CHIP	1K	5%	1/16W	RB1604	1-233-576-11	RES, CHIP NETWORK 100				
R1653	1-216-817-11	RES-CHIP	470	5%	1/16W	RB1605	1-233-576-11	RES, CHIP NETWORK 100				
R1654	1-216-829-11	RES-CHIP	4.7K	5%	1/16W							
R1655	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W						< VIBRATOR >	
R1656	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	X1601	1-767-925-21	VIBRATOR, CRYSTAL				
R1657	1-216-821-11	RES-CHIP	1K	5%	1/16W							
R1658	1-216-837-11	RES-CHIP	22K	5%	1/16W							
R1659	1-216-837-11	RES-CHIP	22K	5%	1/16W							
R1660	1-216-821-11	RES-CHIP	1K	5%	1/16W						* A-1272-481-A A BOARD, COMPLETE	
R1661	1-216-821-11	RES-CHIP	1K	5%	1/16W						*****	
R1662	1-216-827-11	RES-CHIP	3.3K	5%	1/16W							
R1663	1-216-818-11	RES-CHIP	560	5%	1/16W						4-382-854-11 SCREW (M3X10), P, SW (+)	
R1665	1-218-692-11	METAL CHIP	1K	0.5%	1/16W							
											< CAPACITOR >	
R1666	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C1	1-126-933-11	ELECT	100UF	20%	16V	
R1667	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C2	1-104-665-11	ELECT	100UF	20%	25V	
R1668	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C3	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1669	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C4	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1670	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C5	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1671	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C6	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1672	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C7	1-126-933-11	ELECT	100UF	20%	16V	
R1673	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C8	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1674	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C9	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V	
R1675	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C10	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1676	1-216-821-11	RES-CHIP	1K	5%	1/16W	C11	1-126-933-11	ELECT	100UF	20%	16V	
R1681	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C12	1-126-933-11	ELECT	100UF	20%	16V	
R1682	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C13	1-164-392-11	CERAMIC CHIP	390PF	5%	50V	
R1683	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C14	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1684	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C15	1-164-392-11	CERAMIC CHIP	390PF	5%	50V	
R1685	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C16	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
R1690	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C17	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1691	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C18	1-162-975-11	CERAMIC CHIP	24PF	5%	50V	
R1692	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C19	1-162-975-11	CERAMIC CHIP	24PF	5%	50V	
R1693	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C20	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1694	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C21	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1695	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C22	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1696	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C23	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1697	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C24	1-126-947-11	ELECT	47UF	20%	16V	
R1698	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C26	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1699	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C27	1-126-947-11	ELECT	47UF	20%	16V	
R1700	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C28	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1701	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C29	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1702	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C30	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1703	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C31	1-126-947-11	ELECT	47UF	20%	16V	
R1704	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C33	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1705	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C34	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1706	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	C35	1-126-947-11	ELECT	47UF	20%	16V	
R1707	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C36	1-126-934-11	ELECT	220UF	20%	10V	
R1708	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C37	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1709	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C38	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1710	1-216-864-11	SHORT	0			C39	1-164-156-11	CERAMIC CHIP	0.1UF		25V	
R1711	1-216-833-11	RES-CHIP	10K	5%	1/16W	C40	1-162-974-11	CERAMIC CHIP	0.01UF		50V	
R1712	1-216-833-11	RES-CHIP	10K	5%	1/16W							

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REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK		
C41	1-126-934-11	ELECT	220UF	20%	10V	C106	1-126-933-11	ELECT	100UF	20%	16V
C42	1-162-974-11	CERAMIC CHIP	0.01UF	50V		C108	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C43	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C109	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C44	1-126-947-11	ELECT	47UF	20%	16V	C110	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C45	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C111	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C46	1-162-974-11	CERAMIC CHIP	0.01UF		50V	C112	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C47	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C113	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C49	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C115	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C50	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C116	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C51	1-126-947-11	ELECT	47UF	20%	16V	C119	1-126-933-11	ELECT	100UF	20%	16V
C52	1-162-974-11	CERAMIC CHIP	0.01UF		50V	C120	1-126-933-11	ELECT	100UF	20%	16V
C53	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C123	1-162-966-11	CERAMIC CHIP	0.0022UF	10%	50V
C54	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C124	1-164-346-11	CERAMIC CHIP	1UF		16V
C55	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C125	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C56	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C128	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C57	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C129	1-165-176-11	CERAMIC CHIP	0.047UF	10%	16V
C59	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C130	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V
C60	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C131	1-126-961-11	ELECT	2.2UF	20%	50V
C61	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C132	1-126-935-11	ELECT	470UF	20%	16V
C62	1-126-947-11	ELECT	47UF	20%	16V	C133	1-126-964-11	ELECT	10UF	20%	50V
C63	1-126-935-11	ELECT	470UF	20%	6.3V	C134	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C65	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C135	1-126-964-11	ELECT	10UF	20%	50V
C66	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C136	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C67	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C137	1-126-964-11	ELECT	10UF	20%	50V
C68	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C138	1-126-964-11	ELECT	10UF	20%	50V
C69	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C139	1-126-964-11	ELECT	10UF	20%	50V
C70	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C140	1-126-933-11	ELECT	100UF	20%	16V
C73	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C141	1-126-933-11	ELECT	100UF	20%	16V
C74	1-126-964-11	ELECT	10UF	20%	50V	C142	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C75	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C143	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C76	1-162-966-11	CERAMIC CHIP	0.0022UF	10%	50V	C144	1-126-964-11	ELECT	10UF	20%	50V
C77	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C145	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V
C78	1-104-665-11	ELECT	100UF	20%	25V	C301	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V
C79	1-126-933-11	ELECT	100UF	20%	16V	C302	1-125-837-91	CERAMIC CHIP	1UF	10%	6.3V
C80	1-126-967-11	ELECT	47UF	20%	50V	C303	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C81	1-104-665-11	ELECT	100UF	20%	10V	C304	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C82	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C305	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C83	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C306	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C84	1-126-933-11	ELECT	100UF	20%	16V	C307	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C85	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C308	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V
C86	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V	C309	1-126-933-11	ELECT	100UF	20%	16V
C87	1-126-960-11	ELECT	1UF	20%	50V	C310	1-126-964-11	ELECT	10UF	20%	50V
C88	1-126-933-11	ELECT	100UF	20%	16V	C311	1-126-933-11	ELECT	100UF	20%	16V
C90	1-126-964-11	ELECT	10UF	20%	50V	C312	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C92	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C313	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C93	1-126-964-11	ELECT	10UF	20%	50V	C314	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C94	1-164-346-11	CERAMIC CHIP	1UF		16V	C315	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C95	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V	C316	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V
C96	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C317	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C97	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C318	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C98	1-126-960-11	ELECT	1UF	20%	50V	C319	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V
C99	1-165-176-11	CERAMIC CHIP	0.047UF	10%	16V	C320	1-126-963-11	ELECT	4.7UF	20%	50V
C101	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	C321	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C102	1-126-964-11	ELECT	10UF	20%	50V	C322	1-126-933-11	ELECT	100UF	20%	16V
C103	1-126-964-11	ELECT	10UF	20%	50V	C323	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C104	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C324	1-125-837-91	CERAMIC CHIP	1UF	10%	6.3V
C105	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C325	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V

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REF. NO.	PART NO.	DESCRIPTION	REMARK		REF. NO.	PART NO.	DESCRIPTION	REMARK		
C326	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C383	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C327	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C384	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C328	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C385	1-162-968-11	CERAMIC CHIP	0.0047UF	10% 50V
C329	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C386	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C330	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V	C387	1-126-964-11	ELECT	10UF	20% 50V
C331	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C388	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C332	1-126-964-11	ELECT	10UF	20%	50V	C389	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C333	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C390	1-126-964-11	ELECT	10UF	20% 50V
C334	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C391	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C335	1-126-933-11	ELECT	100UF	20%	16V	C392	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C336	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C393	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C337	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C394	1-126-933-11	ELECT	100UF	20% 16V
C338	1-126-963-11	ELECT	4.7UF	20%	50V	C395	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C339	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C396	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C340	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C397	1-125-891-11	CERAMIC CHIP	0.47UF	10% 10V
C341	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C398	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C342	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C399	1-162-917-11	CERAMIC CHIP	15PF	5% 50V
C343	1-126-963-11	ELECT	4.7UF	20%	50V	C400	1-126-933-11	ELECT	100UF	20% 16V
C344	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C401	1-162-917-11	CERAMIC CHIP	15PF	5% 50V
C345	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C402	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C346	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C403	1-126-947-11	ELECT	47UF	20% 16V
C347	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C404	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C348	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C405	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C349	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C406	1-127-760-11	CERAMIC CHIP	4.7UF	10% 6.3V
C350	1-126-935-11	ELECT	470UF	20%	16V	C407	1-127-760-11	CERAMIC CHIP	4.7UF	10% 6.3V
C351	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C408	1-127-760-11	CERAMIC CHIP	4.7UF	10% 6.3V
C352	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C410	1-126-934-11	ELECT	220UF	20% 16V
C353	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C411	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C354	1-126-963-11	ELECT	4.7UF	20%	50V	C412	1-125-837-91	CERAMIC CHIP	1UF	10% 6.3V
C355	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C413	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C356	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C414	1-162-970-11	CERAMIC CHIP	0.01UF	10% 16V
C357	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C415	1-125-837-91	CERAMIC CHIP	1UF	10% 6.3V
C358	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C416	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C359	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C417	1-126-933-11	ELECT	100UF	20% 16V
C360	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C418	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C361	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C419	1-126-933-11	ELECT	100UF	20% 16V
C362	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C420	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C363	1-126-933-11	ELECT	100UF	20%	16V	C421	1-162-964-11	CERAMIC CHIP	0.001UF	10% 50V
C364	1-126-933-11	ELECT	100UF	20%	16V	C422	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C365	1-126-933-11	ELECT	100UF	20%	16V	C423	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C366	1-125-837-91	CERAMIC CHIP	1UF	10%	6.3V	C426	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C367	1-125-837-91	CERAMIC CHIP	1UF	10%	6.3V	C430	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C368	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C431	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C369	1-126-933-11	ELECT	100UF	20%	16V	C435	1-126-933-11	ELECT	100UF	20% 16V
C370	1-126-933-11	ELECT	100UF	20%	16V	C438	1-126-933-11	ELECT	100UF	20% 16V
C371	1-126-933-11	ELECT	100UF	20%	16V	C439	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C372	1-126-933-11	ELECT	100UF	20%	16V	C440	1-164-156-11	CERAMIC CHIP	0.1UF	25V
C373	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C442	1-135-834-91	CERAMIC CHIP	2.2E+06PF	6.3V
C374	1-126-933-11	ELECT	100UF	20%	16V	C443	1-126-933-11	ELECT	100UF	20% 16V
C375	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C444	1-110-563-11	CERAMIC CHIP	0.068UF	10% 16V
C376	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C449	1-125-837-91	CERAMIC CHIP	1UF	10% 6.3V
C377	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C455	1-130-495-00	MYLAR	0.1UF	5% 50V
C378	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C457	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C379	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C458	1-136-244-11	FILM	0.1UF	5% 50V
C380	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V	C460	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C381	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C461	1-107-826-11	CERAMIC CHIP	0.1UF	10% 16V
C382	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V					

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REF. NO.	PART NO.	DESCRIPTION	REMARK		REF. NO.	PART NO.	DESCRIPTION	REMARK			
C463	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C739	1-126-963-11	ELECT	4.7UF	20%	50V
C464	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C740	1-126-963-11	ELECT	4.7UF	20%	50V
C466	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	C741	1-126-963-11	ELECT	4.7UF	20%	50V
C467	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C742	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C468	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C745	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C470	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V	C746	1-126-947-11	ELECT	47UF	20%	25V
C472	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C747	1-126-947-11	ELECT	47UF	20%	25V
C476	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C749	1-126-947-11	ELECT	47UF	20%	25V
C477	1-127-760-11	CERAMIC CHIP	4.7UF	10%	6.3V	C750	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C478	1-216-864-11	SHORT	0			C751	1-126-943-11	ELECT	2200UF	20%	25V
C479	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	C752	1-126-943-11	ELECT	2200UF	20%	25V
C480	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C754	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V
C481	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C755	1-126-947-11	ELECT	47UF	20%	25V
C482	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C756	1-126-964-11	ELECT	10UF	20%	50V
C483	1-162-968-11	CERAMIC CHIP	0.0047UF	10%	50V	C757	1-130-495-00	MYLAR	0.1UF	5%	50V
C484	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C758	1-126-947-11	ELECT	47UF	20%	25V
C485	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C759	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C486	1-115-467-11	CERAMIC CHIP	0.22UF	10%	10V	C760	1-126-933-11	ELECT	100UF	20%	16V
C487	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C761	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C488	1-126-933-11	ELECT	100UF	20%	16V	C762	1-104-665-11	ELECT	100UF	20%	25V
C489	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V	C764	1-130-495-00	MYLAR	0.1UF	5%	50V
C490	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C765	1-126-933-11	ELECT	100UF	20%	16V
C494	1-126-933-11	ELECT	100UF	20%	16V	C766	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C495	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C768	1-164-218-11	CERAMIC CHIP	180PF	5%	50V
C497	1-126-933-11	ELECT	100UF	20%	16V	C769	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C498	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C770	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C500	1-164-816-11	CERAMIC CHIP	220PF	2%	50V	C771	1-130-495-00	MYLAR	0.1UF	5%	50V
C501	1-162-974-11	CERAMIC CHIP	0.01UF		50V	C772	1-130-495-00	MYLAR	0.1UF	5%	50V
C502	1-164-816-11	CERAMIC CHIP	220PF	2%	50V	C773	1-164-677-11	CERAMIC CHIP	0.033UF	10%	16V
C503	1-164-816-11	CERAMIC CHIP	220PF	2%	50V	C775	1-162-967-11	CERAMIC CHIP	0.0033UF	10%	16V
C504	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V	C777	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C505	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V	C778	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C506	1-164-816-11	CERAMIC CHIP	220PF	2%	50V	C779	1-126-933-11	ELECT	100UF	20%	16V
C507	1-162-966-11	CERAMIC CHIP	0.0022UF	10%	50V	C780	1-104-665-11	ELECT	100UF	20%	25V
C701	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C781	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C702	1-126-964-11	ELECT	10UF	20%	50V	C782	1-130-489-00	MYLAR	0.033UF	5%	50V
C703	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C783	1-137-364-11	MYLAR	0.001UF	5%	50V
C704	1-126-947-11	ELECT	47UF	20%	25V	C784	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V
C705	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C785	1-126-963-11	ELECT	4.7UF	20%	50V
C706	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C786	1-126-963-11	ELECT	4.7UF	20%	50V
C707	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C787	1-126-960-11	ELECT	1UF	20%	50V
C708	1-104-665-11	ELECT	100UF	20%	10V	C788	1-165-176-11	CERAMIC CHIP	0.047UF	10%	16V
C709	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C789	1-126-964-11	ELECT	10UF	20%	50V
C710	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C790	1-164-677-11	CERAMIC CHIP	0.033UF	10%	16V
C713	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C791	1-162-967-11	CERAMIC CHIP	0.0033UF	10%	16V
C714	1-162-917-11	CERAMIC CHIP	15PF	5%	50V	C792	1-130-489-00	MYLAR	0.033UF	5%	50V
C719	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V	C793	1-130-471-00	MYLAR	0.001UF	5%	50V
C722	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C794	1-125-891-11	CERAMIC CHIP	0.47UF	10%	10V
C728	1-126-933-11	ELECT	100UF	20%	16V	C795	1-126-963-11	ELECT	4.7UF	20%	50V
C730	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V	C796	1-126-933-11	ELECT	100UF	20%	16V
C731	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C797	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C732	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C799	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C733	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V	C800	1-162-970-11	CERAMIC CHIP	0.01UF	10%	16V
C735	1-126-933-11	ELECT	100UF	20%	16V	C801	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C736	1-164-156-11	CERAMIC CHIP	0.1UF		25V	C802	1-126-935-11	ELECT	470UF	20%	16V
C737	1-164-156-11	CERAMIC CHIP	0.1UF		25V						
C738	1-126-933-11	ELECT	100UF	20%	16V						

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Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
< CONNECTOR >											
CN1	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		D729	8-719-404-50	MA111-TX					
CN2	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		D730	8-719-069-33	DTZ-TT11-6.8B					
< FERRITE BEAD >											
CN3	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		FB1	1-414-445-11	FERRITE	0UH				
CN4	* 1-564-510-11	PLUG, CONNECTOR 7P		FB2	1-414-445-11	FERRITE	0UH				
CN5	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P		FB3	1-414-445-11	FERRITE	0UH				
CN6	* 1-793-922-11	CONNECTOR, DIN (RECEPTACLE)64P		FB4	1-414-445-11	FERRITE	0UH				
CN7	* 1-564-508-11	PLUG, CONNECTOR 5P		FB5	1-216-864-11	SHORT	0				
CN8	1-695-915-11	TAB (CONTACT)		FB6	1-414-445-11	FERRITE	0UH				
CN9	* 1-564-509-11	PLUG, CONNECTOR 6P		FB301	1-414-760-21	FERRITE	0UH				
CN10	* 1-564-511-11	PLUG, CONNECTOR 8P		< FILTER >							
CN11	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P		FL3	1-233-512-21	FERRITE	37UH				
CN12	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P		FL4	1-239-848-11	FILTER, LOW PASS					
CN13	* 1-793-922-11	CONNECTOR, DIN (RECEPTACLE)64P		FL5	1-239-848-11	FILTER, LOW PASS					
CN14	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		FL6	1-239-848-11	FILTER, LOW PASS					
CN15	1-695-915-11	TAB (CONTACT)		FL7	1-239-848-11	FILTER, LOW PASS					
CN16	* 1-564-506-11	PLUG, CONNECTOR 3P		< IC >							
CN17	* 1-564-508-11	PLUG, CONNECTOR 5P		IC1	8-759-445-59	BA033T					
CN18	* 1-564-508-11	PLUG, CONNECTOR 5P		IC2	8-759-198-03	PQ09RF21					
CN19	* 1-564-508-11	PLUG, CONNECTOR 5P		IC3	8-759-830-08	IC NJM2068V-TE2					
CN701	* 1-564-507-11	PLUG, CONNECTOR 4P		IC4	8-759-568-27	MSM514265C-60JS					
CN702	* 1-564-509-11	PLUG, CONNECTOR 6P		IC5	8-759-100-96	UPC4558G2					
CN703	* 1-564-509-11	PLUG, CONNECTOR 6P		IC6	8-759-594-44	UPD64082GF-3BA					
CN704	* 1-564-509-11	PLUG, CONNECTOR 6P		IC7	8-759-100-96	UPC4558G2					
CN705	* 1-564-507-11	PLUG, CONNECTOR 4P		IC8	8-759-445-59	BA033T					
CN706	* 1-564-507-11	PLUG, CONNECTOR 4P		IC9	8-759-701-79	NJM7812FA					
< DIODE >											
D1	8-719-404-50	MA111-TX		IC10	8-759-100-96	UPC4558G2					
D5	8-719-083-87	UDZS-TE17-33B		IC11	8-759-100-96	UPC4558G2					
D7	8-719-069-55	UDZSTE-175.6B		IC12	8-759-833-12	IC NJM2395AF05					
D307	8-719-069-33	DTZ-TT11-6.8B		IC301	8-752-089-50	CXA2103Q					
D312	8-719-069-55	UDZSTE-175.6B		IC302	8-752-916-40	CXP85840A-039Q					
D317	8-719-404-50	MA111-TX		IC303	8-752-089-50	CXA2103Q					
D318	8-719-404-50	MA111-TX		IC304	8-752-916-40	CXP85840A-039Q					
D319	8-719-404-50	MA111-TX		IC305	8-759-595-97	SN74LV4053ANSR					
D321	8-719-404-50	MA111-TX		IC306	8-752-093-84	CXA2151Q					
D701	8-719-941-86	DAN202U		IC307	8-759-595-97	SN74LV4053ANSR					
D702	8-719-404-50	MA111-TX		IC308	8-752-395-13	CXD2085M-T4					
D703	8-719-083-57	DIODE UDVZSTE-173.6B		IC309	8-752-100-25	CXA2150AQ					
D704	8-719-941-86	DAN202U		IC310	8-759-349-11	PST9145NL					
D705	8-719-083-87	UDZS-TE17-33B		IC311	8-759-700-07	NJM2903M					
D706	8-719-083-87	UDZS-TE17-33B		IC312	8-759-082-58	TC7W08FU					
D708	8-719-404-50	MA111-TX		IC701	8-759-349-11	PST9145NL					
D709	8-719-404-50	MA111-TX		IC702	6-700-149-01	M24C04-MN6T(A)					
D710	8-719-941-86	DAN202U		IC703	8-759-575-72	M24C08-WMN6T					
D711	8-719-941-86	DAN202U		IC704	6-800-449-01	M306V2ME-176FP					
D712	8-719-941-86	DAN202U		IC705	8-752-068-37	CXA1726AM					
D713	8-719-941-86	DAN202U		IC706	8-752-068-37	CXA1726AM					
D718	8-719-404-50	MA111-TX		IC707	8-759-100-96	UPC4558G2					
D719	8-719-404-50	MA111-TX		IC708	8-759-190-89	TDA7265					
D720	8-719-920-67	ERC91-02		IC709	8-759-830-08	IC NJM2068V-TE2					
D721	8-719-920-67	ERC91-02		IC710	8-759-830-08	IC NJM2068V-TE2					
D723	8-719-083-85	UDZS-TE17-22B		IC711	8-759-690-57	BH3868BFS-E2					
D724	8-719-083-85	UDZS-TE17-22B									
D725	8-719-083-85	UDZS-TE17-22B									
D726	8-719-083-85	UDZS-TE17-22B									

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
< COIL >							
L1	1-414-181-11	INDUCTOR	4.7UH	Q6	8-729-422-27	2SD601A-Q	
L2	1-469-555-21	INDUCTOR	10UH	Q7	8-729-026-49	2SA1037AK-T146-R	
L3	1-469-555-21	INDUCTOR	10UH	Q8	8-729-026-49	2SA1037AK-T146-R	
L4	1-469-555-21	INDUCTOR	10UH	Q11	8-729-422-27	2SD601A-Q	
L5	1-414-193-41	INDUCTOR	220UH	Q12	8-729-026-49	2SA1037AK-T146-R	
L6	1-469-555-21	INDUCTOR	10UH	Q13	8-729-026-49	2SA1037AK-T146-R	
L7	1-414-856-11	INDUCTOR	10UH	Q14	8-729-422-27	2SD601A-Q	
L8	1-414-856-11	INDUCTOR	10UH	Q15	8-729-026-49	2SA1037AK-T146-R	
L9	1-414-856-11	INDUCTOR	10UH	Q16	8-729-026-49	2SA1037AK-T146-R	
L10	1-412-537-31	INDUCTOR	100UH	Q17	8-729-422-27	2SD601A-Q	
L11	1-414-856-11	INDUCTOR	10UH	Q18	8-729-422-27	2SD601A-Q	
L12	1-414-856-11	INDUCTOR	10UH	Q19	8-729-422-27	2SD601A-Q	
L13	1-414-856-11	INDUCTOR	10UH	Q20	8-729-422-27	2SD601A-Q	
L301	1-469-555-21	INDUCTOR	10UH	Q21	8-729-026-49	2SA1037AK-T146-R	
L302	1-469-555-21	INDUCTOR	10UH	Q22	8-729-422-27	2SD601A-Q	
L303	1-469-555-21	INDUCTOR	10UH	Q23	8-729-422-27	2SD601A-Q	
L304	1-469-555-21	INDUCTOR	10UH	Q24	8-729-422-27	2SD601A-Q	
L305	1-469-555-21	INDUCTOR	10UH	Q25	8-729-422-27	2SD601A-Q	
L306	1-414-193-41	INDUCTOR	220UH	Q26	8-729-422-27	2SD601A-Q	
L307	1-469-555-21	INDUCTOR	10UH	Q27	8-729-422-27	2SD601A-Q	
L308	1-414-856-11	INDUCTOR	10UH	Q28	8-729-026-49	2SA1037AK-T146-R	
L309	1-469-555-21	INDUCTOR	10UH	Q301	8-729-422-27	2SD601A-Q	
L310	1-469-555-21	INDUCTOR	10UH	Q302	8-729-422-27	2SD601A-Q	
L311	1-469-555-21	INDUCTOR	10UH	Q303	8-729-026-49	2SA1037AK-T146-R	
L312	1-469-555-21	INDUCTOR	10UH	Q304	8-729-422-27	2SD601A-Q	
L313	1-414-856-11	INDUCTOR	10UH	Q305	8-729-422-27	2SD601A-Q	
L314	1-469-555-21	INDUCTOR	10UH	Q306	8-729-422-27	2SD601A-Q	
L315	1-469-555-21	INDUCTOR	10UH	Q307	8-729-422-27	2SD601A-Q	
L316	1-414-856-11	INDUCTOR	10UH	Q308	8-729-026-49	2SA1037AK-T146-R	
L317	1-414-856-11	INDUCTOR	10UH	Q309	8-729-422-27	2SD601A-Q	
L318	1-469-555-21	INDUCTOR	10UH	Q310	8-729-422-27	2SD601A-Q	
L321	1-414-856-11	INDUCTOR	10UH	Q311	8-729-422-27	2SD601A-Q	
L701	1-414-179-21	INDUCTOR	2.2UH	Q312	8-729-026-49	2SA1037AK-T146-R	
L702	1-412-911-11	FERRITE	0UH	Q313	8-729-422-27	2SD601A-Q	
L704	1-469-555-21	INDUCTOR	10UH	Q314	8-729-422-27	2SD601A-Q	
L705	1-469-555-21	INDUCTOR	10UH	Q315	8-729-422-27	2SD601A-Q	
< NEON LAMP >							
NL701	1-517-778-21	LAMP, NEON		Q316	8-729-422-27	2SD601A-Q	
NL702	1-517-778-21	LAMP, NEON		Q317	8-729-422-27	2SD601A-Q	
NL703	1-517-778-21	LAMP, NEON		Q318	8-729-422-27	2SD601A-Q	
< IC LINK >							
PS1	0 1-532-679-00	LINK, IC		Q319	8-729-422-27	2SD601A-Q	
PS2	0 1-532-685-00	LINK, IC		Q320	8-729-422-27	2SD601A-Q	
PS3	0 1-532-679-00	LINK, IC		Q321	8-729-422-27	2SD601A-Q	
PS701	0 1-576-336-21	LINK, IC		Q322	8-729-422-27	2SD601A-Q	
PS702	0 1-576-336-21	LINK, IC		Q323	8-729-422-27	2SD601A-Q	
< TRANSISTOR >							
Q1	8-729-026-49	2SA1037AK-T146-R		Q324	8-729-422-27	2SD601A-Q	
Q2	8-729-026-49	2SA1037AK-T146-R		Q325	8-729-026-49	2SA1037AK-T146-R	
Q3	8-729-422-27	2SD601A-Q		Q326	8-729-026-49	2SA1037AK-T146-R	
Q4	8-729-026-49	2SA1037AK-T146-R		Q327	8-729-026-49	2SA1037AK-T146-R	
Q5	8-729-422-27	2SD601A-Q		Q328	8-729-026-49	2SA1037AK-T146-R	
< NEON LAMP >							
Q330	8-729-026-49	2SA1037AK-T146-R		Q329	8-729-026-49	2SA1037AK-T146-R	
Q331	8-729-026-49	2SA1037AK-T146-R		Q330	8-729-026-49	2SA1037AK-T146-R	
Q332	8-729-026-49	2SA1037AK-T146-R		Q331	8-729-026-49	2SA1037AK-T146-R	
Q333	8-729-026-49	2SA1037AK-T146-R		Q332	8-729-026-49	2SA1037AK-T146-R	
Q334	8-729-026-49	2SA1037AK-T146-R		Q333	8-729-026-49	2SA1037AK-T146-R	
Q335	8-729-422-27	2SD601A-Q		Q334	8-729-026-49	2SA1037AK-T146-R	
Q336	8-729-422-27	2SD601A-Q		Q335	8-729-422-27	2SD601A-Q	

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q337	8-729-422-27	2SD601A-Q	< RESISTOR >				
Q338	8-729-422-27	2SD601A-Q		R1	1-216-464-11	METAL OXIDE	18K 5% 2W
Q339	8-729-422-27	2SD601A-Q		R2	1-216-813-11	RES-CHIP	220 5% 1/16W
Q340	8-729-422-27	2SD601A-Q		R3	1-216-813-11	RES-CHIP	220 5% 1/16W
Q341	8-729-422-27	2SD601A-Q		R4	1-216-813-11	RES-CHIP	220 5% 1/16W
Q342	8-729-422-27	2SD601A-Q		R5	1-216-813-11	RES-CHIP	220 5% 1/16W
Q343	8-729-122-63	2SA1226					
Q344	8-729-026-49	2SA1037AK-T146-R		R6	1-216-813-11	RES-CHIP	220 5% 1/16W
Q345	8-729-026-49	2SA1037AK-T146-R		R7	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q346	8-729-422-27	2SD601A-Q		R8	1-216-813-11	RES-CHIP	220 5% 1/16W
Q347	8-729-122-63	2SA1226		R9	1-216-813-11	RES-CHIP	220 5% 1/16W
Q348	8-729-026-49	2SA1037AK-T146-R		R10	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q349	8-729-422-27	2SD601A-Q					
Q351	8-729-122-63	2SA1226		R11	1-218-720-11	METAL CHIP	15K 0.5% 1/16W
Q352	8-729-422-27	2SD601A-Q		R12	1-218-722-11	METAL CHIP	18K 0.5% 1/16W
Q353	8-729-026-49	2SA1037AK-T146-R		R13	1-218-740-11	METAL CHIP	100K 0.5% 1/16W
Q354	8-729-026-49	2SA1037AK-T146-R		R14	1-218-295-11	RES-CHIP	43K 5% 1/16W
Q355	8-729-422-27	2SD601A-Q		R15	1-216-821-11	RES-CHIP	1K 5% 1/16W
Q356	8-729-026-49	2SA1037AK-T146-R		R16	1-218-702-11	METAL CHIP	2.7K 0.5% 1/16W
Q357	8-729-026-49	2SA1037AK-T146-R		R17	1-218-706-11	METAL CHIP	3.9K 0.5% 1/16W
Q358	8-729-026-49	2SA1037AK-T146-R		R18	1-218-714-11	METAL CHIP	8.2K 0.5% 1/16W
Q361	8-729-422-27	2SD601A-Q		R19	1-216-817-11	RES-CHIP	470 5% 1/16W
Q363	8-729-422-27	2SD601A-Q		R20	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
Q367	8-729-122-63	2SA1226					
Q368	8-729-422-27	2SD601A-Q		R21	1-216-839-11	RES-CHIP	33K 5% 1/16W
Q369	1-801-806-11	TR DTC144EKA		R22	1-216-817-11	RES-CHIP	470 5% 1/16W
Q373	8-729-422-27	2SD601A-Q		R23	1-216-809-11	RES-CHIP	100 5% 1/16W
Q374	8-729-422-27	2SD601A-Q		R24	1-216-809-11	RES-CHIP	100 5% 1/16W
Q375	8-729-422-27	2SD601A-Q		R25	1-216-809-11	RES-CHIP	100 5% 1/16W
Q378	8-729-422-27	2SD601A-Q					
Q379	8-729-026-49	2SA1037AK-T146-R		R26	1-216-809-11	RES-CHIP	100 5% 1/16W
Q380	8-729-422-27	2SD601A-Q		R27	1-218-707-11	METAL CHIP	4.3K 0.5% 1/16W
Q381	8-729-422-27	2SD601A-Q		R29	1-216-864-11	SHORT	0
Q501	8-729-026-49	2SA1037AK-T146-R		R30	1-216-809-11	RES-CHIP	100 5% 1/16W
Q502	8-729-422-27	2SD601A-Q		R31	1-216-809-11	RES-CHIP	100 5% 1/16W
Q701	8-729-422-27	2SD601A-Q					
Q702	8-729-026-49	2SA1037AK-T146-R		R32	1-216-809-11	RES-CHIP	100 5% 1/16W
Q703	8-729-422-27	2SD601A-Q		R33	1-216-809-11	RES-CHIP	100 5% 1/16W
Q704	8-729-026-49	2SA1037AK-T146-R		R37	1-216-853-11	RES-CHIP	470K 5% 1/16W
Q705	8-729-422-27	2SD601A-Q		R39	1-216-855-11	RES-CHIP	680K 5% 1/16W
Q706	8-729-026-49	2SA1037AK-T146-R		R40	1-216-809-11	RES-CHIP	100 5% 1/16W
Q707	1-801-806-11	TR DTC144EKA					
Q708	8-729-422-27	2SD601A-Q		R42	1-216-855-11	RES-CHIP	680K 5% 1/16W
Q709	8-729-422-27	2SD601A-Q		R43	1-216-853-11	RES-CHIP	470K 5% 1/16W
Q710	8-729-422-27	2SD601A-Q		R44	1-249-377-11	CARBON	0.47 5% 1/4W
Q712	8-729-026-49	2SA1037AK-T146-R					
Q713	8-729-026-49	2SA1037AK-T146-R		R46	1-216-822-11	RES-CHIP	1.2K 5% 1/16W
Q714	8-729-027-38	DTA144EKA-T146		R48	1-216-809-11	RES-CHIP	100 5% 1/16W
Q715	8-729-422-27	2SD601A-Q					
Q716	8-729-422-27	2SD601A-Q		R49	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q717	8-729-422-27	2SD601A-Q		R50	1-216-809-11	RES-CHIP	100 5% 1/16W
Q718	8-729-422-27	2SD601A-Q		R51	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q721	8-729-026-49	2SA1037AK-T146-R		R52	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q722	8-729-422-27	2SD601A-Q		R53	1-216-817-11	RES-CHIP	470 5% 1/16W
Q723	8-729-422-27	2SD601A-Q					
Q724	8-729-422-27	2SD601A-Q		R54	1-216-817-11	RES-CHIP	470 5% 1/16W
Q725	8-729-026-49	2SA1037AK-T146-R		R55	1-216-822-11	RES-CHIP	1.2K 5% 1/16W
Q726	8-729-026-49	2SA1037AK-T146-R		R56	1-216-805-11	RES-CHIP	47 5% 1/16W
				R57	1-216-805-11	RES-CHIP	47 5% 1/16W
				R59	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R60	1-216-833-11	RES-CHIP	10K 5% 1/16W
				R61	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
				R62	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R63	1-216-809-11	RES-CHIP	100 5% 1/16W
				R64	1-216-837-11	RES-CHIP	22K 5% 1/16W

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REF. NO.	PART NO.	DESCRIPTION		REMARK	REF. NO.	PART NO.	DESCRIPTION		REMARK		
R65	1-216-833-11	RES-CHIP	10K	5%	1/16W	R130	1-216-821-11	RES-CHIP	1K	5%	1/16W
R66	1-216-849-11	RES-CHIP	220K	5%	1/16W	R131	1-216-837-11	RES-CHIP	22K	5%	1/16W
R67	1-216-841-11	RES-CHIP	47K	5%	1/16W	R133	1-218-686-11	METAL CHIP	560	0.5%	1/16W
R68	1-216-839-11	RES-CHIP	33K	5%	1/16W	R134	1-218-683-11	METAL CHIP	430	0.5%	1/16W
R69	1-216-857-11	RES-CHIP	1M	5%	1/16W	R135	1-216-809-11	RES-CHIP	100	5%	1/16W
R70	1-216-845-11	RES-CHIP	100K	5%	1/16W	R136	1-216-821-11	RES-CHIP	1K	5%	1/16W
R71	1-216-813-11	RES-CHIP	220	5%	1/16W	R137	1-216-833-11	RES-CHIP	10K	5%	1/16W
R72	1-216-821-11	RES-CHIP	1K	5%	1/16W	R138	1-216-833-11	RES-CHIP	10K	5%	1/16W
R73	1-218-686-11	METAL CHIP	560	0.5%	1/16W	R139	1-216-841-11	RES-CHIP	47K	5%	1/16W
R74	1-218-684-11	METAL CHIP	470	0.5%	1/16W	R140	1-216-833-11	RES-CHIP	10K	5%	1/16W
R75	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R141	1-216-809-11	RES-CHIP	100	5%	1/16W
R76	1-216-818-11	RES-CHIP	560	5%	1/16W	R142	1-216-843-11	RES-CHIP	68K	5%	1/16W
R77	1-216-821-11	RES-CHIP	1K	5%	1/16W	R143	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R78	1-218-686-11	METAL CHIP	560	0.5%	1/16W	R144	1-216-843-11	RES-CHIP	68K	5%	1/16W
R79	1-216-818-11	RES-CHIP	560	5%	1/16W	R145	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R80	1-218-686-11	METAL CHIP	560	0.5%	1/16W	R146	1-218-295-11	RES-CHIP	43K	5%	1/16W
R81	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R151	1-216-833-11	RES-CHIP	10K	5%	1/16W
R82	1-216-821-11	RES-CHIP	1K	5%	1/16W	R152	1-216-833-11	RES-CHIP	10K	5%	1/16W
R85	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	R153	1-216-833-11	RES-CHIP	10K	5%	1/16W
R87	1-216-833-11	RES-CHIP	10K	5%	1/16W	R154	1-216-830-11	RES-CHIP	5.6K	5%	1/16W
R88	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	R155	1-216-864-11	SHORT	0		
R89	1-216-813-11	RES-CHIP	220	5%	1/16W	R301	1-216-809-11	RES-CHIP	100	5%	1/16W
R90	1-216-864-11	SHORT	0			R302	1-216-809-11	RES-CHIP	100	5%	1/16W
R91	1-216-864-11	SHORT	0			R303	1-216-833-11	RES-CHIP	10K	5%	1/16W
R92	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	R304	1-216-833-11	RES-CHIP	10K	5%	1/16W
R93	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	R305	1-216-835-11	RES-CHIP	15K	5%	1/16W
R95	1-216-818-11	RES-CHIP	560	5%	1/16W	R306	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W
R96	1-216-818-11	RES-CHIP	560	5%	1/16W	R307	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W
R99	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R308	1-216-821-11	RES-CHIP	1K	5%	1/16W
R100	1-216-833-11	RES-CHIP	10K	5%	1/16W	R309	1-216-813-11	RES-CHIP	220	5%	1/16W
R102	1-216-818-11	RES-CHIP	560	5%	1/16W	R310	1-216-857-11	RES-CHIP	1M	5%	1/16W
R103	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R311	1-216-840-11	RES-CHIP	39K	5%	1/16W
R104	1-216-821-11	RES-CHIP	1K	5%	1/16W	R312	1-216-809-11	RES-CHIP	100	5%	1/16W
R105	1-216-821-11	RES-CHIP	1K	5%	1/16W	R313	1-216-833-11	RES-CHIP	10K	5%	1/16W
R107	1-216-833-11	RES-CHIP	10K	5%	1/16W	R314	1-216-833-11	RES-CHIP	10K	5%	1/16W
R108	1-216-818-11	RES-CHIP	560	5%	1/16W	R315	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R109	1-216-807-11	RES-CHIP	68	5%	1/16W	R316	1-216-821-11	RES-CHIP	1K	5%	1/16W
R110	1-216-809-11	RES-CHIP	100	5%	1/16W	R317	1-216-821-11	RES-CHIP	1K	5%	1/16W
R111	1-216-809-11	RES-CHIP	100	5%	1/16W	R318	1-216-833-11	RES-CHIP	10K	5%	1/16W
R112	1-216-857-11	RES-CHIP	1M	5%	1/16W	R319	1-216-864-11	SHORT	0		
R113	1-216-845-11	RES-CHIP	100K	5%	1/16W	R320	1-216-833-11	RES-CHIP	10K	5%	1/16W
R114	1-216-809-11	RES-CHIP	100	5%	1/16W	R321	1-216-821-11	RES-CHIP	1K	5%	1/16W
R115	1-216-820-11	RES-CHIP	820	5%	1/16W	R322	1-216-809-11	RES-CHIP	100	5%	1/16W
R116	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R323	1-216-809-11	RES-CHIP	100	5%	1/16W
R117	1-216-821-11	RES-CHIP	1K	5%	1/16W	R324	1-216-809-11	RES-CHIP	100	5%	1/16W
R118	1-216-820-11	RES-CHIP	820	5%	1/16W	R325	1-216-835-11	RES-CHIP	15K	5%	1/16W
R119	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R326	1-216-864-11	SHORT	0		
R120	1-216-834-11	RES-CHIP	12K	5%	1/16W	R327	1-216-817-11	RES-CHIP	470	5%	1/16W
R121	1-216-839-11	RES-CHIP	33K	5%	1/16W	R329	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R122	1-216-820-11	RES-CHIP	820	5%	1/16W	R330	1-216-828-11	RES-CHIP	3.9K	5%	1/16W
R123	1-216-833-11	RES-CHIP	10K	5%	1/16W	R331	1-216-833-11	RES-CHIP	10K	5%	1/16W
R124	1-216-834-11	RES-CHIP	12K	5%	1/16W	R332	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R125	1-216-839-11	RES-CHIP	33K	5%	1/16W	R333	1-216-809-11	RES-CHIP	100	5%	1/16W
R126	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R334	1-216-809-11	RES-CHIP	100	5%	1/16W
R127	1-216-839-11	RES-CHIP	33K	5%	1/16W	R335	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R128	1-216-821-11	RES-CHIP	1K	5%	1/16W	R336	1-216-809-11	RES-CHIP	100	5%	1/16W
R129	1-216-805-11	RES-CHIP	47	5%	1/16W	R337	1-216-823-11	RES-CHIP	1.5K	5%	1/16W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
R338	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	R394	1-216-809-11	RES-CHIP	100	5%	1/16W
R339	1-216-809-11	RES-CHIP	100	5%	1/16W	R395	1-216-821-11	RES-CHIP	1K	5%	1/16W
R340	1-216-828-11	RES-CHIP	3.9K	5%	1/16W	R396	1-216-821-11	RES-CHIP	1K	5%	1/16W
R341	1-218-706-11	METAL CHIP	3.9K	0.5%	1/16W	R397	1-216-821-11	RES-CHIP	1K	5%	1/16W
R342	1-216-841-11	RES-CHIP	47K	5%	1/16W	R398	1-216-845-11	RES-CHIP	100K	5%	1/16W
R343	1-216-809-11	RES-CHIP	100	5%	1/16W	R399	1-216-833-11	RES-CHIP	10K	5%	1/16W
R344	1-216-809-11	RES-CHIP	100	5%	1/16W	R400	1-216-845-11	RES-CHIP	100K	5%	1/16W
R345	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W	R401	1-216-845-11	RES-CHIP	100K	5%	1/16W
R346	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W	R402	1-216-845-11	RES-CHIP	100K	5%	1/16W
R347	1-216-817-11	RES-CHIP	470	5%	1/16W	R403	1-216-845-11	RES-CHIP	100K	5%	1/16W
R348	1-216-841-11	RES-CHIP	47K	5%	1/16W	R404	1-216-845-11	RES-CHIP	100K	5%	1/16W
R349	1-216-813-11	RES-CHIP	220	5%	1/16W	R405	1-216-845-11	RES-CHIP	100K	5%	1/16W
R350	1-216-809-11	RES-CHIP	100	5%	1/16W	R406	1-216-864-11	SHORT	0		
R351	1-216-813-11	RES-CHIP	220	5%	1/16W	R407	1-216-833-11	RES-CHIP	10K	5%	1/16W
R352	1-216-813-11	RES-CHIP	220	5%	1/16W	R408	1-216-821-11	RES-CHIP	1K	5%	1/16W
R353	1-216-809-11	RES-CHIP	100	5%	1/16W	R409	1-216-821-11	RES-CHIP	1K	5%	1/16W
R354	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R410	1-218-673-11	METAL CHIP	160	0.5%	1/16W
R355	1-216-809-11	RES-CHIP	100	5%	1/16W	R411	1-218-673-11	METAL CHIP	160	0.5%	1/16W
R356	1-216-841-11	RES-CHIP	47K	5%	1/16W	R412	1-216-813-11	RES-CHIP	220	5%	1/16W
R357	1-216-837-11	RES-CHIP	22K	5%	1/16W	R413	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R358	1-216-837-11	RES-CHIP	22K	5%	1/16W	R414	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R359	1-216-837-11	RES-CHIP	22K	5%	1/16W	R415	1-218-668-11	METAL CHIP	100	0.5%	1/16W
R360	1-216-837-11	RES-CHIP	22K	5%	1/16W	R416	1-216-857-11	RES-CHIP	1M	5%	1/16W
R361	1-216-837-11	RES-CHIP	22K	5%	1/16W	R417	1-216-809-11	RES-CHIP	100	5%	1/16W
R362	1-216-837-11	RES-CHIP	22K	5%	1/16W	R418	1-216-809-11	RES-CHIP	100	5%	1/16W
R363	1-216-809-11	RES-CHIP	100	5%	1/16W	R419	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W
R364	1-216-809-11	RES-CHIP	100	5%	1/16W	R420	1-218-698-11	METAL CHIP	1.8K	0.5%	1/16W
R365	1-216-809-11	RES-CHIP	100	5%	1/16W	R421	1-216-809-11	RES-CHIP	100	5%	1/16W
R366	1-216-841-11	RES-CHIP	47K	5%	1/16W	R422	1-216-809-11	RES-CHIP	100	5%	1/16W
R367	1-216-821-11	RES-CHIP	1K	5%	1/16W	R423	1-216-809-11	RES-CHIP	100	5%	1/16W
R368	1-216-821-11	RES-CHIP	1K	5%	1/16W	R424	1-218-674-11	METAL CHIP	180	0.5%	1/16W
R369	1-216-821-11	RES-CHIP	1K	5%	1/16W	R425	1-218-674-11	METAL CHIP	180	0.5%	1/16W
R370	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R426	1-218-674-11	METAL CHIP	180	0.5%	1/16W
R371	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R427	1-218-673-11	METAL CHIP	160	0.5%	1/16W
R372	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R428	1-216-864-11	SHORT	0		
R373	1-216-809-11	RES-CHIP	100	5%	1/16W	R431	1-216-809-11	RES-CHIP	100	5%	1/16W
R374	1-216-815-11	RES-CHIP	330	5%	1/16W	R432	1-216-817-11	RES-CHIP	470	5%	1/16W
R375	1-216-815-11	RES-CHIP	330	5%	1/16W	R433	1-216-817-11	RES-CHIP	470	5%	1/16W
R376	1-216-815-11	RES-CHIP	330	5%	1/16W	R434	1-216-809-11	RES-CHIP	100	5%	1/16W
R377	1-216-837-11	RES-CHIP	22K	5%	1/16W	R435	1-216-817-11	RES-CHIP	470	5%	1/16W
R378	1-216-837-11	RES-CHIP	22K	5%	1/16W	R436	1-216-809-11	RES-CHIP	100	5%	1/16W
R379	1-216-837-11	RES-CHIP	22K	5%	1/16W	R437	1-216-809-11	RES-CHIP	100	5%	1/16W
R380	1-216-837-11	RES-CHIP	22K	5%	1/16W	R438	1-216-809-11	RES-CHIP	100	5%	1/16W
R381	1-216-837-11	RES-CHIP	22K	5%	1/16W	R439	1-216-817-11	RES-CHIP	470	5%	1/16W
R382	1-216-837-11	RES-CHIP	22K	5%	1/16W	R440	1-216-813-11	RES-CHIP	220	5%	1/16W
R383	1-216-809-11	RES-CHIP	100	5%	1/16W	R441	1-216-813-11	RES-CHIP	220	5%	1/16W
R384	1-216-809-11	RES-CHIP	100	5%	1/16W	R442	1-216-813-11	RES-CHIP	220	5%	1/16W
R385	1-216-821-11	RES-CHIP	1K	5%	1/16W	R443	1-216-809-11	RES-CHIP	100	5%	1/16W
R386	1-216-809-11	RES-CHIP	100	5%	1/16W	R444	1-216-809-11	RES-CHIP	100	5%	1/16W
R387	1-216-845-11	RES-CHIP	100K	5%	1/16W	R445	1-216-809-11	RES-CHIP	100	5%	1/16W
R388	1-216-837-11	RES-CHIP	22K	5%	1/16W	R446	1-216-809-11	RES-CHIP	100	5%	1/16W
R389	1-216-809-11	RES-CHIP	100	5%	1/16W	R447	1-216-809-11	RES-CHIP	100	5%	1/16W
R390	1-216-809-11	RES-CHIP	100	5%	1/16W	R448	1-216-809-11	RES-CHIP	100	5%	1/16W
R391	1-216-809-11	RES-CHIP	100	5%	1/16W	R449	1-216-809-11	RES-CHIP	100	5%	1/16W
R392	1-216-809-11	RES-CHIP	100	5%	1/16W	R450	1-216-814-11	RES-CHIP	270	5%	1/16W
R393	1-216-809-11	RES-CHIP	100	5%	1/16W	R451	1-216-814-11	RES-CHIP	270	5%	1/16W
				R452	1-216-814-11	RES-CHIP	270	5%	1/16W		

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REF. NO.	PART NO.	DESCRIPTION		REMARK	REF. NO.	PART NO.	DESCRIPTION		REMARK		
R453	1-216-841-11	RES-CHIP	47K	5%	1/16W	R550	1-216-863-11	RES-CHIP	3.3M	5%	1/16W
R454	1-216-837-11	RES-CHIP	22K	5%	1/16W	R551	1-216-833-11	RES-CHIP	10K	5%	1/16W
R455	1-216-837-11	RES-CHIP	22K	5%	1/16W	R552	1-216-809-11	RES-CHIP	100	5%	1/16W
R456	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R553	1-216-834-11	RES-CHIP	12K	5%	1/16W
R457	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R554	1-216-809-11	RES-CHIP	100	5%	1/16W
R458	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R556	1-216-808-11	RES-CHIP	82	5%	1/16W
R459	1-216-815-11	RES-CHIP	330	5%	1/16W	R557	1-216-808-11	RES-CHIP	82	5%	1/16W
R460	1-216-815-11	RES-CHIP	330	5%	1/16W	R558	1-216-808-11	RES-CHIP	82	5%	1/16W
R461	1-216-815-11	RES-CHIP	330	5%	1/16W	R559	1-216-817-11	RES-CHIP	470	5%	1/16W
R462	1-216-817-11	RES-CHIP	470	5%	1/16W	R561	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R463	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	R562	1-216-817-11	RES-CHIP	470	5%	1/16W
R464	1-216-809-11	RES-CHIP	100	5%	1/16W	R566	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R468	1-216-809-11	RES-CHIP	100	5%	1/16W	R567	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R469	1-216-797-11	RES-CHIP	10	5%	1/16W	R568	1-216-809-11	RES-CHIP	100	5%	1/16W
R470	1-216-839-11	RES-CHIP	33K	5%	1/16W	R569	1-216-809-11	RES-CHIP	100	5%	1/16W
R473	1-216-809-11	RES-CHIP	100	5%	1/16W	R570	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R476	1-216-808-11	RES-CHIP	82	5%	1/16W	R571	1-216-864-11	SHORT	0		
R477	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R572	1-216-835-11	RES-CHIP	15K	5%	1/16W
R480	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R574	1-216-833-11	RES-CHIP	10K	5%	1/16W
R481	1-216-821-11	RES-CHIP	1K	5%	1/16W	R575	1-216-833-11	RES-CHIP	10K	5%	1/16W
R482	1-216-839-11	RES-CHIP	33K	5%	1/16W	R576	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R484	1-216-809-11	RES-CHIP	100	5%	1/16W	R577	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R486	1-216-809-11	RES-CHIP	100	5%	1/16W	R593	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R487	1-216-809-11	RES-CHIP	100	5%	1/16W	R594	1-216-833-11	RES-CHIP	10K	5%	1/16W
R489	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R596	1-216-841-11	RES-CHIP	47K	5%	1/16W
R490	1-216-808-11	RES-CHIP	82	5%	1/16W	R597	1-216-821-11	RES-CHIP	1K	5%	1/16W
R491	1-216-833-11	RES-CHIP	10K	5%	1/16W	R598	1-216-833-11	RES-CHIP	10K	5%	1/16W
R492	1-216-864-11	SHORT	0			R599	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R493	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R602	1-216-837-11	RES-CHIP	22K	5%	1/16W
R494	1-216-833-11	RES-CHIP	10K	5%	1/16W	R603	1-216-833-11	RES-CHIP	10K	5%	1/16W
R496	1-216-809-11	RES-CHIP	100	5%	1/16W	R604	1-216-833-11	RES-CHIP	10K	5%	1/16W
R501	1-216-808-11	RES-CHIP	82	5%	1/16W	R605	1-216-833-11	RES-CHIP	10K	5%	1/16W
R502	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R606	1-216-833-11	RES-CHIP	10K	5%	1/16W
R503	1-216-833-11	RES-CHIP	10K	5%	1/16W	R607	1-216-833-11	RES-CHIP	10K	5%	1/16W
R504	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R608	1-216-833-11	RES-CHIP	10K	5%	1/16W
R505	1-216-821-11	RES-CHIP	1K	5%	1/16W	R609	1-216-809-11	RES-CHIP	100	5%	1/16W
R506	1-216-837-11	RES-CHIP	22K	5%	1/16W	R613	1-216-833-11	RES-CHIP	10K	5%	1/16W
R507	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R614	1-216-836-11	RES-CHIP	18K	5%	1/16W
R508	1-216-821-11	RES-CHIP	1K	5%	1/16W	R615	1-216-832-11	RES-CHIP	8.2K	5%	1/16W
R509	1-216-837-11	RES-CHIP	22K	5%	1/16W	R616	1-216-833-11	RES-CHIP	10K	5%	1/16W
R510	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R617	1-216-809-11	RES-CHIP	100	5%	1/16W
R512	1-216-864-11	SHORT	0			R618	1-216-809-11	RES-CHIP	100	5%	1/16W
R513	1-216-826-11	RES-CHIP	2.7K	5%	1/16W	R619	1-216-821-11	RES-CHIP	1K	5%	1/16W
R515	1-216-809-11	RES-CHIP	100	5%	1/16W	R620	1-216-807-11	RES-CHIP	68	5%	1/16W
R516	1-216-809-11	RES-CHIP	100	5%	1/16W	R621	1-216-807-11	RES-CHIP	68	5%	1/16W
R517	1-216-809-11	RES-CHIP	100	5%	1/16W	R622	1-216-807-11	RES-CHIP	68	5%	1/16W
R518	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R624	1-216-809-11	RES-CHIP	100	5%	1/16W
R519	1-216-821-11	RES-CHIP	1K	5%	1/16W	R628	1-249-377-11	CARBON	0.47	5%	1/4W
R521	1-216-833-11	RES-CHIP	10K	5%	1/16W	R701	1-216-817-11	RES-CHIP	470	5%	1/16W
R527	1-216-864-11	SHORT	0			R702	1-216-841-11	RES-CHIP	47K	5%	1/16W
R538	1-216-809-11	RES-CHIP	100	5%	1/16W	R703	1-216-821-11	RES-CHIP	1K	5%	1/16W
R540	1-216-809-11	RES-CHIP	100	5%	1/16W	R705	1-216-809-11	RES-CHIP	100	5%	1/16W
R541	1-216-831-11	RES-CHIP	6.8K	5%	1/16W	R706	1-216-809-11	RES-CHIP	100	5%	1/16W
R542	1-216-809-11	RES-CHIP	100	5%	1/16W	R707	1-216-809-11	RES-CHIP	100	5%	1/16W
R543	1-216-826-11	RES-CHIP	2.7K	5%	1/16W	R708	1-216-809-11	RES-CHIP	100	5%	1/16W
R544	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R709	1-216-817-11	RES-CHIP	470	5%	1/16W
R547	1-216-809-11	RES-CHIP	100	5%	1/16W						

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R710	1-216-813-11	RES-CHIP	220 5% 1/16W	R778	1-216-809-11	RES-CHIP	100 5% 1/16W
R711	1-216-833-11	RES-CHIP	10K 5% 1/16W	R779	1-216-809-11	RES-CHIP	100 5% 1/16W
R712	1-216-813-11	RES-CHIP	220 5% 1/16W	R781	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
R714	1-216-809-11	RES-CHIP	100 5% 1/16W	R782	1-216-809-11	RES-CHIP	100 5% 1/16W
R715	1-216-809-11	RES-CHIP	100 5% 1/16W	R783	1-216-809-11	RES-CHIP	100 5% 1/16W
R716	1-216-821-11	RES-CHIP	1K 5% 1/16W	R784	1-216-809-11	RES-CHIP	100 5% 1/16W
R717	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R785	1-216-821-11	RES-CHIP	1K 5% 1/16W
R718	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R786	1-216-821-11	RES-CHIP	1K 5% 1/16W
R719	1-216-813-11	RES-CHIP	220 5% 1/16W	R787	1-216-833-11	RES-CHIP	10K 5% 1/16W
R720	1-216-809-11	RES-CHIP	100 5% 1/16W	R788	1-216-845-11	RES-CHIP	100K 5% 1/16W
R721	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R790	1-216-837-11	RES-CHIP	22K 5% 1/16W
R722	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R796	1-216-821-11	RES-CHIP	1K 5% 1/16W
R723	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R797	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R724	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R803	1-216-833-11	RES-CHIP	10K 5% 1/16W
R725	1-216-809-11	RES-CHIP	100 5% 1/16W	R804	1-216-837-11	RES-CHIP	22K 5% 1/16W
R728	1-216-864-11	SHORT	0	R806	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R732	1-216-809-11	RES-CHIP	100 5% 1/16W	R807	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R733	1-216-821-11	RES-CHIP	1K 5% 1/16W	R808	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R735	1-216-833-11	RES-CHIP	10K 5% 1/16W	R809	1-216-835-11	RES-CHIP	15K 5% 1/16W
R736	1-216-813-11	RES-CHIP	220 5% 1/16W	R810	1-216-833-11	RES-CHIP	10K 5% 1/16W
R737	1-216-833-11	RES-CHIP	10K 5% 1/16W	R811	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W
R738	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	R813	1-216-857-11	RES-CHIP	1M 5% 1/16W
R740	1-216-809-11	RES-CHIP	100 5% 1/16W	R814	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W
R742	1-216-821-11	RES-CHIP	1K 5% 1/16W	R815	1-216-830-11	RES-CHIP	5.6K 5% 1/16W
R743	1-216-809-11	RES-CHIP	100 5% 1/16W	R816	1-216-830-11	RES-CHIP	5.6K 5% 1/16W
R744	1-216-821-11	RES-CHIP	1K 5% 1/16W	R817	1-216-845-11	RES-CHIP	100K 5% 1/16W
R745	1-216-841-11	RES-CHIP	47K 5% 1/16W	R818	1-216-833-11	RES-CHIP	10K 5% 1/16W
R746	1-216-809-11	RES-CHIP	100 5% 1/16W	R819	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R748	1-216-833-11	RES-CHIP	10K 5% 1/16W	R820	1-216-838-11	RES-CHIP	27K 5% 1/16W
R749	1-216-849-11	RES-CHIP	220K 5% 1/16W	R821	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R750	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R823	1-216-835-11	RES-CHIP	15K 5% 1/16W
R751	1-216-821-11	RES-CHIP	1K 5% 1/16W	R824	1-216-838-11	RES-CHIP	27K 5% 1/16W
R752	1-216-821-11	RES-CHIP	1K 5% 1/16W	R825	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R753	1-216-809-11	RES-CHIP	100 5% 1/16W	R826	1-216-830-11	RES-CHIP	5.6K 5% 1/16W
R754	1-216-809-11	RES-CHIP	100 5% 1/16W	R828	1-216-817-11	RES-CHIP	470 5% 1/16W
R755	1-216-809-11	RES-CHIP	100 5% 1/16W	R829	1-216-864-11	SHORT	0
R756	1-216-809-11	RES-CHIP	100 5% 1/16W	R830	1-216-849-11	RES-CHIP	220K 5% 1/16W
R758	1-216-809-11	RES-CHIP	100 5% 1/16W	R831	1-216-839-11	RES-CHIP	33K 5% 1/16W
R759	1-216-821-11	RES-CHIP	1K 5% 1/16W	R832	1-216-817-11	RES-CHIP	470 5% 1/16W
R760	1-216-849-11	RES-CHIP	220K 5% 1/16W	R833	1-216-839-11	RES-CHIP	33K 5% 1/16W
R761	1-216-849-11	RES-CHIP	220K 5% 1/16W	R834	1-216-805-11	RES-CHIP	47 5% 1/16W
R762	1-216-845-11	RES-CHIP	100K 5% 1/16W	R835	1-216-837-11	RES-CHIP	22K 5% 1/16W
R763	1-216-815-11	RES-CHIP	330 5% 1/16W	R836	1-216-864-11	SHORT	0
R764	1-216-821-11	RES-CHIP	1K 5% 1/16W	R840	1-216-841-11	RES-CHIP	47K 5% 1/16W
R765	1-216-815-11	RES-CHIP	330 5% 1/16W	R841	1-216-839-11	RES-CHIP	33K 5% 1/16W
R766	1-216-821-11	RES-CHIP	1K 5% 1/16W	R842	1-216-817-11	RES-CHIP	470 5% 1/16W
R767	1-216-833-11	RES-CHIP	10K 5% 1/16W	R843	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R768	1-216-809-11	RES-CHIP	100 5% 1/16W	R844	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R769	1-216-809-11	RES-CHIP	100 5% 1/16W	R845	1-216-817-11	RES-CHIP	470 5% 1/16W
R770	1-216-845-11	RES-CHIP	100K 5% 1/16W	R848	1-216-836-11	RES-CHIP	18K 5% 1/16W
R771	1-216-809-11	RES-CHIP	100 5% 1/16W	R850	1-216-830-11	RES-CHIP	5.6K 5% 1/16W
R772	1-216-821-11	RES-CHIP	1K 5% 1/16W	R851	1-216-833-11	RES-CHIP	10K 5% 1/16W
R773	1-216-809-11	RES-CHIP	100 5% 1/16W	R852	1-216-833-11	RES-CHIP	10K 5% 1/16W
R774	1-216-809-11	RES-CHIP	100 5% 1/16W	R854	1-216-838-11	RES-CHIP	27K 5% 1/16W
R775	1-216-821-11	RES-CHIP	1K 5% 1/16W	R855	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R777	1-216-821-11	RES-CHIP	1K 5% 1/16W	R856	1-216-829-11	RES-CHIP	4.7K 5% 1/16W

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REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK						
R857	1-216-838-11	RES-CHIP	27K	5%	1/16W			< VIBRATOR >							
R858	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	X1	1-577-110-11	VIBRATOR, CRYSTAL							
R859	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W	X301	1-567-505-11	OSCILLATOR, CRYSTAL							
R860	1-249-389-11	CARBON	4.7	5%	1/4W	X302	1-767-179-31	VIBRATOR, SERAMIC							
R861	1-249-389-11	CARBON	4.7	5%	1/4W	X303	1-567-505-11	OSCILLATOR, CRYSTAL							
R862	1-216-839-11	RES-CHIP	33K	5%	1/16W	X304	1-767-179-31	VIBRATOR, SERAMIC							
R863	1-216-841-11	RES-CHIP	47K	5%	1/16W	X305	1-781-282-11	VIBRATOR, CERAMIC							
R864	1-216-839-11	RES-CHIP	33K	5%	1/16W	X306	1-767-989-11	VIBRATOR, CERAMIC							
R865	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W	X307	1-760-895-21	VIBRATOR, CERAMIC							
R866	1-216-841-11	RES-CHIP	47K	5%	1/16W	X701	1-579-358-21	VIBLATOR, CRYSTAL							
R867	1-216-837-11	RES-CHIP	22K	5%	1/16W	*****									
R868	1-216-837-11	RES-CHIP	22K	5%	1/16W	* A-1348-038-A D BOARD, COMPLETE									
R869	1-216-834-11	RES-CHIP	12K	5%	1/16W	*****									
R870	1-216-841-11	RES-CHIP	47K	5%	1/16W	3-710-578-01 COVER, VOLUME, 6 MOLD									
R871	1-216-809-11	RES-CHIP	100	5%	1/16W	4-382-854-11 SCREW (M3X10), P, SW (+)									
R872	1-216-809-11	RES-CHIP	100	5%	1/16W	7-682-952-09 SCREW +PSW 3X16									
R873	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	< CAPACITOR >									
R874	1-216-841-11	RES-CHIP	47K	5%	1/16W	C8001	1-137-372-11	MYLAR	0.022UF	5%	50V				
R875	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	C8002	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R876	1-216-841-11	RES-CHIP	47K	5%	1/16W	C8003	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R877	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	C8004	1-104-666-11	ELECT	220UF	20%	25V				
R878	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8005	1-126-942-61	ELECT	1000UF	20%	25V				
R879	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8006	1-126-942-61	ELECT	1000UF	20%	25V				
R880	1-216-809-11	RES-CHIP	100	5%	1/16W	C8007	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R881	1-216-809-11	RES-CHIP	100	5%	1/16W	C8008	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R882	1-216-809-11	RES-CHIP	100	5%	1/16W	C8009	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V				
R883	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	C8010	1-136-177-00	FILM	1UF	5%	50V				
R884	1-216-833-11	RES-CHIP	10K	5%	1/16W	C8011	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R885	1-216-833-11	RES-CHIP	10K	5%	1/16W	C8012	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V				
R886	1-216-833-11	RES-CHIP	10K	5%	1/16W	C8013	1-162-927-11	CERAMIC CHIP	100PF	5%	50V				
R887	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8014	1-104-665-11	ELECT	100UF	20%	25V				
R888	1-216-849-11	RES-CHIP	220K	5%	1/16W	C8015	1-126-969-11	ELECT	220UF	20%	50V				
R889	1-216-807-11	RES-CHIP	68	5%	1/16W	C8016	1-104-665-11	ELECT	100UF	20%	25V				
R890	1-216-807-11	RES-CHIP	68	5%	1/16W	C8017	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V				
R891	1-216-807-11	RES-CHIP	68	5%	1/16W	C8018	1-126-964-11	ELECT	10UF	20%	50V				
R892	1-216-837-11	RES-CHIP	22K	5%	1/16W	C8023	1-106-220-00	MYLAR	0.1UF	10%	100V				
R893	1-216-857-11	RES-CHIP	1M	5%	1/16W	C8024	1-137-372-11	MYLAR	0.022UF	5%	50V				
R895	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	C8025	1-126-968-11	ELECT	100UF	20%	50V				
R896	1-216-864-11	SHORT	0			C8026	1-126-968-11	ELECT	100UF	20%	50V				
R897	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8028	1-126-968-11	ELECT	100UF	20%	50V				
R898	1-216-805-11	RES-CHIP	47	5%	1/16W	C8029	1-126-968-11	ELECT	100UF	20%	50V				
R899	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8031	1-107-636-11	ELECT	10UF	20%	160V				
< NETWORK RESISTOR >															
RB1	1-233-576-11	RES, CHIP NETWORK	100			C8032	1-126-968-11	ELECT	100UF	20%	50V				
RB2	1-233-576-11	RES, CHIP NETWORK	100			C8033	1-126-968-11	ELECT	100UF	20%	50V				
RB3	1-233-576-11	RES, CHIP NETWORK	100			C8036	1-126-968-11	ELECT	100UF	20%	50V				
RB4	1-233-576-11	RES, CHIP NETWORK	100			C8037	1-126-968-11	ELECT	100UF	20%	50V				
RB5	1-233-576-11	RES, CHIP NETWORK	100			C8040	1-115-349-51	CERAMIC	0.01UF		2KV				
RB6	1-233-576-11	RES, CHIP NETWORK	100			C8045	1-126-965-11	ELECT	22UF	20%	50V				
< TUNER >															
TU1	8-598-430-50	TUNER, FSS BTF-FA401				C8046	1-126-965-11	ELECT	22UF	20%	50V				
TU2	8-598-542-20	TUNER, FSS BTF-WA412				C8047	1-162-974-11	CERAMIC CHIP	0.01UF	50V					
						C8048	1-126-965-11	ELECT	22UF	20%	50V				
						C8049	1-162-974-11	CERAMIC CHIP	0.01UF	50V					
						C8050	1-126-965-11	ELECT	22UF	20%	50V				
						C8051	1-102-038-00	CERAMIC	0.001UF		500V				

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REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK		
C8052	1-126-965-11	ELECT	22UF	20%	50V	C8110	1-126-960-11	ELECT	1UF	20%	50V
C8053	1-162-974-11	CERAMIC CHIP	0.01UF	50V		C8111	1-126-960-11	ELECT	1UF	20%	50V
C8054	1-162-974-11	CERAMIC CHIP	0.01UF	50V		C8112	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C8055	1-164-156-11	CERAMIC CHIP	0.1UF	25V		C8113	1-130-495-00	MYLAR	0.1UF	5%	50V
C8056	1-107-652-11	ELECT	10UF	20%	250V	C8114	1-125-473-11	ELECT(BLOCK)	1000UF	20%	160V
C8057	1-126-959-11	ELECT	0.47UF	20%	50V	C8115	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C8058	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	C8116	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C8059	1-127-715-91	CERAMIC CHIP	0.22UF	10%	16V	C8117	1-102-038-00	CERAMIC	0.001UF	500V	
C8060	1-104-665-11	ELECT	100UF	20%	25V	C8118	1-136-189-00	MYLAR	0.1UF	10%	250V
C8061	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C8119	1-164-156-11	CERAMIC CHIP	0.1UF	25	
C8062	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8120	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C8063	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V	C8121	1-115-349-51	CERAMIC	0.01UF	2KV	
C8064	1-107-636-11	ELECT	10UF	20%	160V	C8122	1-126-934-11	ELECT	220UF	20%	16V
C8065	1-106-383-00	MYLAR	0.047UF	10%	200V	C8123	1-107-444-11	CERAMIC	100PF	10%	2KV
C8066	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8124	1-117-642-11	FILM	8200PF	3%	1.2KV
C8067	1-104-665-11	ELECT	100UF	20%	25V	C8125	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C8068	1-102-038-00	CERAMIC	0.001UF	500V		C8126	1-106-357-00	MYLAR	0.0039UF	99%	200V
C8069	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8127	1-126-942-61	ELECT	1000UF	20%	25V
C8070	1-126-964-11	ELECT	10UF	20%	50V	C8129	1-137-150-11	MYLAR	0.01UF	5%	50V
C8071	1-126-964-11	ELECT	10UF	20%	50V	C8131	1-128-582-11	ELECT	10UF	20%	100V
C8072	1-126-964-11	ELECT	10UF	20%	50V	C8132	1-126-942-61	ELECT	1000UF	20%	25V
C8073	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8133	1-107-649-11	ELECT	2.2UF	20%	250V
C8074	1-104-665-11	ELECT	100UF	20%	25V	C8135	1-109-961-11	FILM	0.75UF	5%	250V
C8075	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8136	1-130-495-00	MYLAR	0.1UF	5%	50V
C8076	1-128-551-11	ELECT	22UF	20%	25V	C8137	1-126-942-61	ELECT	1000UF	20%	25V
C8077	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V	C8138	1-162-964-11	CERAMIC CHIP	0.001UF	10%	50V
C8078	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V	C8139	1-126-964-11	ELECT	10UF	20%	50V
C8079	1-126-964-11	ELECT	10UF	20%	50V	C8142	1-117-664-11	FILM	0.27UF	5%	250V
C8080	1-126-964-11	ELECT	10UF	20%	50V	C8143	1-126-960-11	ELECT	1UF	20%	50V
C8081	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V	C8148	1-104-665-11	ELECT	100UF	20%	25V
C8082	1-165-176-11	CERAMIC CHIP	0.047UF	10%	16V	C8150	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
C8083	1-130-495-00	MYLAR	0.1UF	5%	50V	C8153	1-126-960-11	ELECT	1UF	20%	50V
C8084	1-130-992-11	FILM	0.022UF	5%	50V						
C8085	1-162-924-11	CERAMIC CHIP	56PF	5%	50V						
C8086	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V						
C8087	1-126-960-11	ELECT	1UF	20%	50V						
C8088	1-126-964-11	ELECT	10UF	20%	50V						
C8089	1-107-444-11	CERAMIC	100PF	10%	2KV						
C8090	1-126-960-11	ELECT	1UF	20%	50V						
C8091	1-104-665-11	ELECT	100UF	20%	25V						
C8092	1-117-640-11	FILM	6800PF	3%	1.2KV						
C8093	1-107-648-91	ELECT	100UF	20%	160V						
C8094	1-104-665-11	ELECT	100UF	20%	25V						
C8095	1-162-970-11	CERAMIC CHIP	0.01UF	10%	25V						
C8096	1-136-684-51	MYLAR	0.0022UF	10%	100V						
C8097	1-162-131-11	CERAMIC	220PF	10%	2KV						
C8098	1-162-131-11	CERAMIC	220PF	10%	2KV						
C8099	1-115-416-11	CERAMIC CHIP	0.001UF	5%	25V						
C8100	1-126-961-11	ELECT	2.2UF	20%	50V						
C8102	1-102-038-00	CERAMIC	0.001UF	500V							
C8103	1-126-964-11	ELECT	10UF	20%	50V						
C8104	1-162-965-11	CERAMIC CHIP	0.0015UF	10%	50V						
C8105	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V						
C8106	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V						
C8107	1-136-187-11	MYLAR	0.047UF	10%	250V						
C8108	1-126-964-11	ELECT	10UF	20%	50V						
C8109	1-162-924-11	CERAMIC CHIP	56PF	5%	50V						

< CONNECTOR >

- CN8002* 1-779-890-11 CONNECTOR, BOARD TO BOARD 10P
 CN8003* 1-691-135-11 PIN, CONNECTOR (PC BOARD) 4P
 CN8004* 1-779-890-11 CONNECTOR, BOARD TO BOARD 10P
 CN8005* 1-779-890-11 CONNECTOR, BOARD TO BOARD 10P
 CN8006* 1-779-890-11 CONNECTOR, BOARD TO BOARD 10P
 CN8007* 1-564-506-11 PLUG, CONNECTOR 3P
 CN8008* 1-564-506-11 PLUG, CONNECTOR 3P
 CN8009* 1-564-506-11 PLUG, CONNECTOR 3P
 CN8010* 1-564-507-11 PLUG, CONNECTOR 4P
 CN8011* 1-564-507-11 PLUG, CONNECTOR 4P
 CN8012* 1-564-507-11 PLUG, CONNECTOR 4P
 CN8013* 1-766-177-11 PIN, CONNECTOR (PC BOARD) 9P
 CN8015* 1-506-371-00 PIN, CONNECTOR 2P
 CN8016* 1-564-507-11 PLUG, CONNECTOR 4P
 CN8018* 1-580-689-11 PIN, CONNECTOR (PC BOARD) 4P
 CN8019* 1-580-689-11 PIN, CONNECTOR (PC BOARD) 4P
 CN8020* 1-580-689-11 PIN, CONNECTOR (PC BOARD) 4P
 CN8021* 1-506-371-00 PIN, CONNECTOR 2P
 CN8022* 1-564-510-11 PLUG, CONNECTOR 7P
 CN8023* 1-564-507-11 PLUG, CONNECTOR 4P

D

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Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
< DIODE >											
D8001	8-719-109-98	RD5.6ESB2		FB8016	1-469-869-21	FERRITE	0UH				
D8002	8-719-110-17	RD20ES-B2		FB8017	1-469-869-21	FERRITE	0UH				
D8003	8-719-924-13	MTZJ-T-77-22B		FB8018	1-469-869-21	FERRITE	0UH				
D8004	8-719-908-03	GP08D		FB8019	1-410-397-21	FERRITE	1.1UH				
D8005	8-719-991-33	ISS133T-77		FB8020	1-414-229-11	FERRITE	0UH				
D8006	8-719-991-33	ISS133T-77		FB8021	1-410-397-21	FERRITE	1.1UH				
D8007	8-719-991-33	ISS133T-77		FB8022	1-410-396-41	FERRITE	0.45UH				
D8008	8-719-991-33	ISS133T-77		FB8023	1-410-396-41	FERRITE	0.45UH				
D8009	8-719-991-33	ISS133T-77		FB8024	1-469-869-21	FERRITE	0UH				
D8010	8-719-991-33	ISS133T-77		< IC >							
D8011	8-719-991-33	ISS133T-77		IC8001	8-749-019-08	IC STK392-560					
D8012	8-719-991-33	ISS133T-77		IC8002	8-749-019-08	IC STK392-560					
D8013	8-719-109-85	RD5.1ESB2		IC8003	8-759-593-33	LA78045					
D8014	8-719-109-85	RD5.1ESB2		IC8004	8-759-077-88	AN77L12-TA					
D8015	8-719-991-33	ISS133T-77		IC8005	8-759-585-82	BA9759F-E2					
D8016	8-719-991-33	ISS133T-77		IC8006	8-759-700-07	NJM2903M					
D8019	8-719-991-33	ISS133T-77		IC8007	8-759-700-07	NJM2903M					
D8020	8-719-991-33	ISS133T-77		IC8008	8-759-585-82	BA9759F-E2					
D8021	8-719-061-21	FMQ-G5FMS		IC8009	8-759-803-42	LA6500-FA					
D8022	8-719-991-33	ISS133T-77		IC8012	8-759-701-01	NJM2904M					
< COIL >											
D8023	8-719-991-33	ISS133T-77		L8001	1-412-533-21	INDUCTOR	47UH				
D8024	8-719-110-41	RD15ES-B2		L8002	1-412-533-21	INDUCTOR	47UH				
D8025	8-719-991-33	ISS133T-77		L8003	1-412-525-31	INDUCTOR	10UH				
D8026	8-719-109-89	RD5.6ESB2		L8004	1-412-533-21	INDUCTOR	47UH				
D8027	8-719-028-45	D2L20U		L8005	1-412-533-21	INDUCTOR	47UH				
D8028	8-719-110-48	RD15ES-B2		L8006	1-412-525-31	INDUCTOR	10UH				
D8029	8-719-028-45	D2L20U		L8007	1-412-533-21	INDUCTOR	47UH				
D8030	8-719-028-45	D2L20U		L8008	1-412-533-21	INDUCTOR	47UH				
D8031	8-719-110-49	RD18ES-B2		L8009	1-412-525-31	INDUCTOR	10UH				
D8032	8-719-302-43	EL1Z		L8010	1-414-187-11	INDUCTOR	47UH				
D8033	8-719-028-72	RGP02-17EL-6433		L8011	1-412-525-31	INDUCTOR	10UH				
D8034	6-500-004-01	DIODE ERD07-15L		L8012	1-414-187-11	INDUCTOR	47UH				
D8035	6-500-004-01	DIODE ERD07-15L		L8013	1-414-856-11	INDUCTOR	10UH				
D8036	8-719-110-41	RD15ES-B2		L8014	1-414-189-31	INDUCTOR	100UH				
D8037	8-719-028-45	D2L20U		L8015	1-414-189-31	INDUCTOR	100UH				
D8038	8-719-302-43	EL1Z		L8016	1-412-537-31	INDUCTOR	100UH				
D8039	8-719-028-72	RGP02-17EL-6433		L8017	1-414-856-11	INDUCTOR	10UH				
D8043	8-719-991-33	ISS133T-77		L8018	1-406-663-21	INDUCTOR	47UH				
D8045	8-719-908-03	GP08D		L8019	1-419-352-11	COIL, HORIZONTAL LINEARITY					
D8046	8-719-991-33	ISS133T-77		L8020	1-412-525-31	INDUCTOR	10UH				
D8047	8-719-991-33	ISS133T-77		L8021	1-406-659-11	INDUCTOR	10UH				
< FERRITE BEAD >											
FB8001	1-410-397-21	FERRITE	1.1UH	L8022	1-412-552-11	INDUCTOR	2.2mmH				
FB8002	1-410-397-21	FERRITE	1.1UH	L8023	1-414-856-11	INDUCTOR	10UH				
FB8003	1-414-229-11	FERRITE	0UH	L8024	1-414-856-11	INDUCTOR	10UH				
FB8004	1-216-864-11	SHORT	0	L8025	1-414-856-11	INDUCTOR	10UH				
FB8005	1-469-869-21	FERRITE	0UH	L8026	1-414-856-11	INDUCTOR	10UH				
FB8006	1-469-869-21	FERRITE	0UH	L8027	1-233-510-11	FILTER, DC LINE					
FB8008	1-410-396-41	FERRITE	0.45UH	< NEON LAMP >							
FB8009	1-410-396-41	FERRITE	0.45UH	NL8001	1-517-778-21	LAMP, NEON					
FB8010	1-410-396-41	FERRITE	0.45UH	< IC LINK >							
FB8011	1-410-396-41	FERRITE	0.45UH	PS8001 Δ 1-533-595-31	LINK, IC						
FB8014	1-469-869-21	FERRITE	0UH								
FB8015	1-469-869-21	FERRITE	0UH								

D

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
PS8002 Δ	1-533-595-31	LINK, IC		R8017	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
PS8003 Δ	1-533-595-31	LINK, IC		R8018	1-216-821-11	RES-CHIP	1K 5% 1/16W
PS8004 Δ	1-533-595-31	LINK, IC		R8019	1-218-712-11	METAL CHIP	6.8K 0.5% 1/16W
PS8005 Δ	1-533-595-31	LINK, IC		R8020	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
PS8006 Δ	1-533-595-31	LINK, IC		R8021	1-216-833-11	RES-CHIP	10K 5% 1/16W
PS8007 Δ	1-533-595-31	LINK, IC		R8022	1-216-839-11	RES-CHIP	33K 5% 1/16W
< TRANSISTOR >				R8023	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8001	8-729-422-27	2SD601A-Q		R8024	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8002	8-729-046-80	2SC4634LS-CB11		R8025	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8003	8-729-026-49	2SA1037AK-T146-R		R8026	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8004	8-729-026-49	2SA1037AK-T146-R		R8029	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8005	8-729-026-49	2SA1037AK-T146-R		R8030	1-215-903-11	METAL OXIDE	68K 5% 2W
Q8007	8-729-046-80	2SC4634LS-CB11		R8031	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8008	8-729-207-89	2SA1358-Y		R8032	1-216-821-11	RES-CHIP	1K 5% 1/16W
Q8009	8-729-207-82	2SC3421-Y		R8033	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8010	8-729-422-27	2SD601A-Q		R8034	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8011	8-729-026-49	2SA1037AK-T146-R		R8035	1-218-694-11	METAL CHIP	1.2K 0.5% 1/16W
Q8014	8-729-422-27	2SD601A-Q		R8036	1-214-800-11	METAL	2.2 1% 1/2W
Q8015	8-729-422-27	2SD601A-Q		R8037	1-215-903-11	METAL OXIDE	68K 5% 2W
Q8016	8-729-422-27	2SD601A-Q		R8038	1-216-809-11	RES-CHIP	100 5% 1/16W
Q8019	8-729-026-49	2SA1037AK-T146-R		R8039	1-214-800-11	METAL	2.2 1% 1/2W
Q8020	8-729-422-27	2SD601A-Q		R8040	1-215-913-11	METAL OXIDE	220 5% 3W
Q8021	8-729-422-27	2SD601A-Q		R8041	1-218-709-11	METAL CHIP	5.1K 0.5% 1/16W
Q8022	8-729-422-27	2SD601A-Q		R8042	1-216-826-11	RES-CHIP	2.7K 5% 1/16W
Q8023	8-729-048-47	2SC2688(5)-LK		R8043	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W
Q8024	8-729-056-50	TRANSISTOR 2SC5681-YB		R8044	1-218-712-11	METAL CHIP	6.8K 0.5% 1/16W
Q8027	8-729-050-13	2SJ585LS-CC11		R8045	1-214-808-11	METAL	4.7 1% 1/2W
Q8028	8-729-422-27	2SD601A-Q		R8046	1-214-808-11	METAL	4.7 1% 1/2W
Q8029	8-729-422-27	2SD601A-Q		R8047	1-215-857-71	METAL OXIDE	10 5% 1W
Q8030	8-729-026-49	2SA1037AK-T146-R		R8048	1-414-189-31	INDUCTOR	100UH
Q8031	8-729-422-27	2SD601A-Q		R8049	1-414-189-31	INDUCTOR	100UH
Q8032	8-729-422-27	2SD601A-Q		R8050	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8035	8-729-050-13	2SJ585LS-CC11		R8051	1-214-808-11	METAL	4.7 1% 1/2W
Q8036	8-729-026-49	2SA1037AK-T146-R		R8053	1-214-808-11	METAL	4.7 1% 1/2W
Q8037	8-729-422-27	2SD601A-Q		R8055	1-218-748-11	METAL CHIP	220K 0.5% 1/16W
Q8038	8-729-038-10	TRANSISTOR 1MB12-140-F153A		R8056	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8039	8-729-048-47	2SC2688(5)-LK		R8057	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8101	8-729-026-49	2SA1037AK-T146-R		R8058	1-216-809-11	RES-CHIP	100 5% 1/16W
< RESISTOR >				R8059	1-214-808-11	METAL	4.7 1% 1/2W
R8001	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R8060	1-214-808-11	METAL	4.7 1% 1/2W
R8002	1-216-809-11	RES-CHIP	100 5% 1/16W	R8061	1-216-390-11	METAL OXIDE	1.2 5% 3W
R8003	1-216-809-11	RES-CHIP	100 5% 1/16W	R8062	1-260-107-11	CARBON	4.7K 5% 1/2W
R8004	1-216-809-11	RES-CHIP	100 5% 1/16W	R8063	1-214-808-11	METAL	4.7 1% 1/2W
R8005	1-215-875-11	METAL OXIDE	10K 5% 1W	R8064	1-214-808-11	METAL	4.7 1% 1/2W
R8007	1-216-809-11	RES-CHIP	100 5% 1/16W	R8065	1-260-328-11	CARBON	1K 5% 1/2W
R8008	1-216-809-11	RES-CHIP	100 5% 1/16W	R8066	1-214-808-11	METAL	4.7 1% 1/2W
R8009	1-216-809-11	RES-CHIP	100 5% 1/16W	R8067	1-214-808-11	METAL	4.7 1% 1/2W
R8010	1-260-131-11	CARBON	470K 5% 1/2W	R8068	1-216-809-11	RES-CHIP	100 5% 1/16W
R8011	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R8069	1-214-808-11	METAL	4.7 1% 1/2W
R8012	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R8070	1-214-808-11	METAL	4.7 1% 1/2W
R8013	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W	R8071	1-215-381-00	METAL	22 1% 1/4W
R8014	1-218-709-11	METAL CHIP	5.1K 0.5% 1/16W	R8073	1-214-808-11	METAL	4.7 1% 1/2W
R8015	1-216-837-11	RES-CHIP	22K 5% 1/16W	R8075	1-214-808-11	METAL	4.7 1% 1/2W
R8016	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R8076	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R8077	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R8078	1-214-808-11	METAL	4.7 1% 1/2W
				R8079	1-214-808-11	METAL	4.7 1% 1/2W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W	R8139	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R8081	1-214-808-11	METAL	4.7	1%	1/2W	R8140	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8082	1-214-808-11	METAL	4.7	1%	1/2W	R8141	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R8083	1-216-821-11	RES-CHIP	1K	5%	1/16W	R8142	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8084	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8143	1-218-734-11	METAL CHIP	56K	0.5%	1/16W
R8085	1-214-808-11	METAL	4.7	1%	1/2W	R8144	1-216-809-11	RES-CHIP	100	5%	1/16W
R8086	1-214-808-11	METAL	4.7	1%	1/2W	R8145	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8087	1-249-385-11	CARBON	2.2	5%	1/4W	R8146	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8088	1-249-385-11	CARBON	2.2	5%	1/4W	R8147	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W
R8089	1-214-808-11	METAL	4.7	1%	1/2W	R8148	1-216-845-11	RES-CHIP	100K	5%	1/16W
R8090	1-214-808-11	METAL	4.7	1%	1/2W	R8149	1-215-905-11	METAL OXIDE	10	5%	3W
R8091	1-214-808-11	METAL	4.7	1%	1/2W	R8150	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R8092	1-214-808-11	METAL	4.7	1%	1/2W	R8151	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R8093	1-214-808-11	METAL	4.7	1%	1/2W	R8152	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8094	1-214-808-11	METAL	4.7	1%	1/2W	R8153	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R8095	1-216-801-11	RES-CHIP	22	5%	1/16W	R8154	1-218-728-11	METAL CHIP	33K	0.5%	1/16W
R8096	1-216-801-11	RES-CHIP	22	5%	1/16W	R8155	1-215-469-00	METAL	100K	1%	1/4W
R8097	1-214-808-11	METAL	4.7	1%	1/2W	R8156	1-215-469-00	METAL	100K	1%	1/4W
R8098	1-214-808-11	METAL	4.7	1%	1/2W	R8157	1-218-738-11	METAL CHIP	82K	0.5%	1/16W
R8099	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	R8159	1-216-834-11	RES-CHIP	12K	5%	1/16W
R8100	1-216-475-11	METAL OXIDE	120	5%	3W	R8160	1-249-393-11	CARBON	10	5%	1/4W
R8101	1-216-475-11	METAL OXIDE	120	5%	3W	R8161	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8102	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8163	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8103	1-216-816-11	RES-CHIP	390	5%	1/16W	R8164	1-218-734-11	METAL CHIP	56K	0.5%	1/16W
R8104	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8105	1-214-808-11	METAL	4.7	1%	1/2W	R8166	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8106	1-214-808-11	METAL	4.7	1%	1/2W	R8167	1-414-189-31	INDUCTOR	100UH		
R8107	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8168	1-216-809-11	RES-CHIP	100	5%	1/16W
R8108	1-216-821-11	RES-CHIP	1K	5%	1/16W	R8169	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8109	1-216-814-11	RES-CHIP	270	5%	1/16W	R8170	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8110	1-249-427-11	CARBON	6.8K	5%	1/4W	R8171	1-216-809-11	RES-CHIP	100	5%	1/16W
R8111	1-216-819-11	RES-CHIP	680	5%	1/16W	R8172	1-249-405-11	CARBON	100	5%	1/4W
R8112	1-216-824-11	RES-CHIP	1.8K	5%	1/16W	R8173	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W	R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W	R8176	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W	R8178	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W	R8179	1-414-189-31	INDUCTOR	100UH		
R8117	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8180	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8118	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8181	1-216-841-11	RES-CHIP	47K	5%	1/16W
R8119	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8182	1-218-748-11	RES-CHIP	220K	5%	1/16W
R8120	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8183	1-218-748-11	RES-CHIP	220K	5%	1/16W
R8121	1-216-809-11	RES-CHIP	100	5%	1/16W	R8184	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8123	1-216-821-11	RES-CHIP	1K	5%	1/16W	R8187	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W	R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8125	1-216-816-11	RES-CHIP	390	5%	1/16W	R8190	1-215-431-00	METAL	2.7K	1%	1/4W
R8126	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	R8191	1-215-429-00	METAL	2.2K	1%	1/4W
R8128	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8192	1-215-449-00	METAL	15K	1%	1/4W
R8129	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R8193	1-215-449-00	METAL	15K	1%	1/4W
R8130	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R8194	1-215-449-00	METAL	15K	1%	1/4W
R8131	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8195	1-215-449-00	METAL	15K	1%	1/4W
R8132	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8196	1-249-425-11	CARBON	4.7K	5%	1/4W
R8133	1-216-487-11	METAL OXIDE	12K	5%	3W	R8197	1-216-809-11	RES-CHIP	100	5%	1/16W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W	R8198	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8135	1-216-487-11	METAL OXIDE	12K	5%	3W	R8201	1-249-397-11	CARBON	22	5%	1/4W
R8136	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8202	1-260-092-11	CARBON	270	5%	1/2W
R8137	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	R8203	1-249-377-11	CARBON	0.47	5%	1/4W
R8138	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8205	1-249-377-11	CARBON	0.47	5%	1/4W

Les composants identifiés par une trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

- The components identified by \blacksquare in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D **G**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R8206	1-249-377-11	CARBON	0.47 5% 1/4W	C5022	1-126-947-11	ELECT	47UF 20% 25V
R8208	1-260-288-11	CARBON	0.47 5% 1/2W	C5024	1-126-947-11	ELECT	47UF 20% 25V
R8209	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5025	1-126-947-11	ELECT	47UF 20% 25V
R8210	1-216-809-11	RES-CHIP	100 5% 1/16W	C5026	1-126-947-11	ELECT	47UF 20% 25V
R8211	1-215-906-11	METAL OXIDE	15 5% 3W	C5027	1-126-951-11	ELECT	470UF 20% 35V
R8212	1-215-907-11	METAL OXIDE	22 5% 3W	C5028	1-126-951-11	ELECT	470UF 20% 35V
R8213	1-216-821-11	RES-CHIP	1K 5% 1/16W	C5029	1-107-639-11	ELECT	47UF 20% 160V
R8216	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5030	1-126-947-11	ELECT	47UF 20% 25V
R8217	1-216-821-11	RES-CHIP	1K 5% 1/16W	C5031	1-126-768-11	ELECT	2200UF 20% 16V
R8218	1-260-123-11	CARBON	100K 5% 1/2W	C5038	1-126-947-11	ELECT	47UF 20% 25V
R8219	1-249-377-11	CARBON	0.47 5% 1/4W	C5039	1-126-947-11	ELECT	47UF 20% 25V
R8220	1-216-821-11	RES-CHIP	1K 5% 1/16W	C5040	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R8223	1-218-748-11	METAL CHIP	220K 0.5% 1/16W	C5041	1-126-767-11	ELECT	1000UF 20% 16V
R8224	1-260-127-11	CARBON	220K 5% 1/2W	C5042	1-126-963-11	ELECT	4.7UF 20% 50V
R8225	1-260-292-11	CARBON	1 5% 1/2W	C5043	1-126-935-11	ELECT	470UF 20% 16V
R8228	1-260-314-11	CARBON	68 5% 1/2W	C5047	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V
R8230	1-218-751-11	METAL CHIP	300K 0.5% 1/16W	C5049	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
< TRANSFORMER >							
T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)		C5050	1-128-554-11	ELECT	330UF 20% 63V
T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)		C5051	1-126-961-11	ELECT	2.2UF 20% 50V
T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)		C5053	1-126-967-11	ELECT	47UF 20% 50V
T8004 \triangle	1-437-399-11	TRANSFORMER, FERRITE (LOT)		C5054	1-126-955-11	ELECT	4700UF 20% 35V
T8005 \triangle	1-453-285-21	FBT ASSY, NX-4006//X4P4		C5055	1-126-933-11	ELECT	100UF 20% 16V
< THERMISTOR >							
TH8001	1-800-193-00	THERMISTOR		C6001	1-126-967-11	ELECT	47UF 20% 50V
< VARIABLE RESISTOR >							
\blacksquare VR8001 \triangle 1-225-628-91 RES, VAR, ADJ,CERME 5K							
\blacksquare VR8002 \triangle 1-225-632-91 RES, VAR, ADJ, CERMET 100K							

* A-1316-566-A G BOARD, COMPLETE							

1-533-223-11 HOLDER, FUSE							
* 4-374-846-01 COVER, CAPACITOR, CAP TYPE							
4-382-854-11 SCREW (M3X10), P, SW (+)							
< CAPACITOR >							
C5001	1-164-645-11	CERAMIC	1000PF 10% 500V	C6015	1-161-964-91	CERAMIC	0.0047UF 250V
C5002	1-164-645-11	CERAMIC	1000PF 10% 500V	C6016	1-161-964-91	CERAMIC	0.0047UF 250V
C5006	1-104-665-11	ELECT	100UF 20% 25V	C6017	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C5007	1-164-645-11	CERAMIC	1000PF 10% 500V	C6018	1-162-974-11	CERAMIC CHIP	0.01UF 50V
C5008	1-164-645-11	CERAMIC	1000PF 10% 500V	C6019	1-126-968-11	ELECT	100UF 20% 50V
C5009	1-126-953-11	ELECT	2200UF 20% 35V	C6020	1-126-963-11	ELECT	4.7UF 20% 50V
C5010	1-126-953-11	ELECT	2200UF 20% 35V	C6021	1-126-964-11	ELECT	10UF 20% 50V
C5011	1-164-645-11	CERAMIC	1000PF 10% 500V	C6022	1-161-964-91	CERAMIC	0.0047UF 250V
C5012	1-164-645-11	CERAMIC	1000PF 10% 500V	C6023	1-161-964-91	CERAMIC	0.0047UF 250V
C5015	1-115-758-11	ELECT	470UF 20% 16V	C6025	1-136-479-11	FILM	0.001UF 2% 50V
C5029	1-136-165-00	FILM	0.1UF 5% 50V	C6029	1-136-165-00	FILM	0.1UF 5% 50V
C6030	1-126-947-11	ELECT	47UF 20% 25V	C6030	1-126-947-11	ELECT	47UF 20% 25V
C6031	1-137-750-11	ELECT	1500UF 20% 250V	C6031	1-137-750-11	ELECT	1500UF 20% 250V
C6032	1-137-750-11	ELECT	1500UF 20% 250V	C6041	1-125-969-91	CERAMIC	680PF 10% 1KV
C6042	1-125-969-91	CERAMIC	680PF 10% 1KV	C6042	1-125-969-91	CERAMIC	680PF 10% 1KV
C6043 \triangle	1-104-706-11	MYLAR	0.22UF 20% 250V	C6043 \triangle	1-104-706-11	MYLAR	0.22UF 20% 250V
C6046	1-126-968-11	ELECT	100UF 20% 50V	C6046	1-126-968-11	ELECT	100UF 20% 50V
C6047	1-135-998-21	FILM	56000PF 3% 800V	C6047	1-135-998-21	FILM	56000PF 3% 800V
< CONNECTOR >							
CN5001* 1-564-508-11 PLUG, CONNECTOR 5P							
CN5002* 1-564-507-11 PLUG, CONNECTOR 4P							
CN5003* 1-564-510-11 PLUG, CONNECTOR 7P							
CN5004* 1-766-177-11 PIN, CONNECTOR (PC BOARD) 9P							
CN5005 1-695-915-11 TAB (CONTACT)							
CN5006 1-695-915-11 TAB (CONTACT)							
CN5007 1-695-915-11 TAB (CONTACT)							

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
CN6005	1-580-843-11	PIN, CONNECTOR (POWER)		FB5006	1-410-396-41	FERRITE	0.45UH
		< DIODE >		FB6001	1-410-396-41	FERRITE	0.45UH
D5001	8-719-083-67	DIODE UDVZSTE-1720B		FB6004	1-216-864-11	SHORT	0
D5002	8-719-060-89	D4SBS6-F		FB6005	1-216-864-11	SHORT	0
D5003	8-719-060-89	D4SBS6-F		FB6006	1-216-864-11	SHORT	0
D5004	8-719-083-45	DIODE 31DF4N-FC5		FB6007	1-216-864-11	SHORT	0
D5005	8-719-083-45	DIODE 31DF4N-FC5		FB6013	1-410-397-21	FERRITE	1.1UH
D5006	8-719-052-37	F10P04Q		FB6014	1-410-397-21	FERRITE	1.1UH
D5007	8-719-404-50	MA111-TX		FB6015	1-410-397-21	FERRITE	1.1UH
D5008	8-719-028-45	D2L20U		FB6016	1-410-397-21	FERRITE	1.1UH
D5009	8-719-028-45	D2L20U					
D5010	8-719-200-31	21DQ05					
D5011	8-719-404-50	MA111-TX		IC501	8-749-012-13	DM-58	
D5012	8-719-083-66	DIODE UDVZSTE-1718B		IC5002	8-759-103-93	UPC393C	
D5013	8-719-069-56	UDZSTE-176.2B		IC5003	8-759-701-84	NJM7905FA	
D5014	8-719-404-50	MA111-TX		IC5004	8-759-640-19	PQ1CG2032FZ	
D5015	8-719-404-50	MA111-TX		IC5005	8-759-198-31	UPC1093J-1-T	
D5016	8-719-083-44	DIODE FSQ05A04		IC5006	8-759-504-46	PQ05RF1	
D5017	8-719-073-25	S1VBA20		IC6003	8-759-670-30	MCZ3001D	
D5018	8-719-056-84	UDZ-TE-17-7.5B					
D5019	8-719-404-50	MA111-TX					
D5020	8-719-404-50	MA111-TX					
D5021	8-719-404-50	MA111-TX					
D5022	8-719-404-50	MA111-TX					
D5023	8-719-404-50	MA111-TX					
D5024	8-719-404-50	MA111-TX					
D5025	8-719-404-50	MA111-TX					
D5026	8-719-404-50	MA111-TX					
D5031	8-719-404-50	MA111-TX					
D5033	8-719-404-50	MA111-TX					
D5034	8-719-083-60	UDZSTE-174.7B					
D6001	8-719-404-50	MA111-TX					
D6002	8-719-948-45	ERA22-08					
D6003	8-719-069-87	DTZ10B					
D6004	8-719-404-50	MA111-TX					
D6005	8-719-404-50	MA111-TX					
D6006	8-719-063-70	D1NL20U					
D6007	8-719-022-99	D6SB60L					
D6009	8-719-083-60	UDZSTE-174.7B					
D6011	8-719-404-50	MA111-TX					
D6012	8-719-979-64	UF4005PKG23					
D6019	8-719-083-60	UDZSTE-174.7B					
D6023	8-719-068-00	ERC04-06SE					
D6024	8-719-068-00	ERC04-06SE					
D6030	8-719-063-70	D1NL20U					
		< FUSE >					
F6001 Δ 1-576-193-11 FUSE							
		< FERRITE BEAD >					
FB5001	1-410-396-41	FERRITE	0.45UH				
FB5002	1-410-396-41	FERRITE	0.45UH				
FB5003	1-410-396-41	FERRITE	0.45UH				
FB5004	1-410-396-41	INDUCTOR	0.45UH				
FB5005	1-410-396-41	FERRITE	0.45UH				
		< IC LINK >					
PS5001	Δ 1-533-597-31	LINK, IC					
PS5002	Δ 1-533-597-31	LINK, IC					
		< TRANSISTOR >					
Q5001	8-729-050-50	TRANSISTOR 2SD1782K-T146-R					

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Replace only with part number specified.

G **S** **H2**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q5002	8-729-422-27	2SD601A-Q		R6038	1-215-481-00	METAL	330K 1% 1/4W
Q5003	8-729-026-49	2SA1037AK-T146-R		R6039	1-216-851-11	RES-CHIP	330K 5% 1/16W
Q5004	8-729-422-27	2SD601A-Q		R6040	1-215-481-00	METAL	330K 1% 1/4W
Q5005	8-729-027-23	DTA114EKA-T146		R6041	1-218-668-11	METAL CHIP	100 0.5% 1/16W
Q5006	8-729-901-87	2SC2411K-CQ		R6042	1-218-719-11	METAL CHIP	13K 0.5% 1/16W
Q5007	8-729-026-49	2SA1037AK-T146-R		R6045	1-218-675-11	METAL CHIP	200 0.5% 1/16W
Q6005	8-729-052-32	IRFIB7N50A		R6046	1-216-813-11	RES-CHIP	220 5% 1/16W
Q6006	8-729-052-32	IRFIB7N50A		R6047	1-216-813-11	RES-CHIP	220 5% 1/16W
< RESISTOR >				R6050	1-249-417-11	CARBON	1K 5% 1/4W
R5005	1-216-831-11	RES-CHIP	6.8K 5% 1/16W	R6054	1-249-393-11	CARBON	10 5% 1/4W
R5006	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6056	1-260-131-11	CARBON	470K 5% 1/2W
R5007	1-249-377-11	CARBON	0.47 5% 1/4W	R6057	1-260-131-11	CARBON	470K 5% 1/2W
R5010	1-247-903-00	CARBON	1M 5% 1/4W	R6058	1-249-393-11	CARBON	10 5% 1/4W
R5011	1-216-818-11	RES-CHIP	560 5% 1/16W	R6062	1-216-833-11	RES-CHIP	10K 5% 1/16W
R5012	1-216-361-00	METAL OXIDE	0.22 5% 2W	R6063	1-216-833-11	RES-CHIP	10K 5% 1/16W
R5013	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6064	1-202-933-61	FUSIBLE	0.1 10% 1/2W
R5014	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R6076	1-243-979-71	METAL OXIDE	0.1 5% 2W
R5015	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	R6080	1-243-979-71	METAL OXIDE	0.1 5% 2W
R5016	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6081	1-249-393-11	CARBON	10 5% 1/4W
R5017	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	< RELAY >			
R5018	1-216-821-11	RES-CHIP	1K 5% 1/16W	RY6002 \triangle 1-755-395-11 RELAY (AC POWER)			
R5019	1-216-857-11	RES-CHIP	1M 5% 1/16W	RY6003 \triangle 1-755-395-11 RELAY (AC POWER)			
R5020	1-216-821-11	RES-CHIP	1K 5% 1/16W	< TRANSFORMER >			
R5021	1-216-821-11	RES-CHIP	1K 5% 1/16W	T6001 \triangle 1-437-436-11 CONVERTER TRANSFORMER (PIT)			
R5022	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	T6004 \triangle 1-435-675-11 TRANSFORMER, STANDBY			
R5023	1-218-750-11	METAL CHIP	270K 0.5% 1/16W	< POSISTOR >			
R5024	1-218-682-11	METAL CHIP	390 0.5% 1/16W	TH6002	1-804-475-21	POSISTOR	
R5025	1-218-697-11	METAL CHIP	1.6K 0.5% 1/16W	< VARISTOR >			
R5026	1-216-833-11	RES-CHIP	10K 5% 1/16W	VD6001	1-801-073-31	VARISTOR TNR14V471K660	
R5027	1-216-821-11	RES-CHIP	1K 5% 1/16W	*****			
R5028	1-216-821-11	RES-CHIP	1K 5% 1/16W	* A-1391-148-A S BOARD, COMPLETE			
R5029	1-216-837-11	RES-CHIP	22K 5% 1/16W	*****			
R5030	1-216-837-11	RES-CHIP	22K 5% 1/16W	< CONNECTOR >			
R5032	1-249-415-11	CARBON	680 5% 1/4W	CN3001* 1-564-506-11 PLUG, CONNECTOR 3P			
R5034	1-216-833-11	RES-CHIP	10K 5% 1/16W	< DIODE >			
R5035	1-216-819-11	RES-CHIP	680 5% 1/16W	D3001	8-719-109-89	RD5.6ESB2	
R5036	1-216-819-11	RES-CHIP	680 5% 1/16W	< SOLAR BATTERY >			
R5037	1-216-821-11	RES-CHIP	1K 5% 1/16W	R5002	1-240-251-11	CMT-MELF	S3002 1-756-063-21 BATTERY, SOLAR
R5038	1-216-821-11	RES-CHIP	1K 5% 1/16W	*****			
R5039	1-216-864-11	SHORT	0	* A-1372-932-A H2 BOARD, COMPLETE			
R5040	1-216-833-11	RES-CHIP	10K 5% 1/16W	*****			
R5041	1-215-866-11	METAL OXIDE	330 5% 1W	< CONNECTOR >			
R5042	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6004	1-216-821-11	RES-CHIP	CN3001* 1-564-506-11 PLUG, CONNECTOR 3P
R5043	1-216-821-11	RES-CHIP	1K 5% 1/16W	< DIODE >			
R5044	1-216-821-11	RES-CHIP	1K 5% 1/16W	R5045	1-216-832-11	RES-CHIP	S3002 1-756-063-21 BATTERY, SOLAR
R5045	1-216-832-11	RES-CHIP	8.2K 5% 1/16W	< SOLAR BATTERY >			
R5047	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6006	1-216-430-11	METAL OXIDE	
R6002	1-240-251-11	CMT-MELF	6.8 5% 10W	R6007	1-216-823-11	RES-CHIP	
R6003	1-260-328-11	CARBON	1K 5% 1/2W	R6008	1-216-845-11	RES-CHIP	
R6004	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R6015	1-219-776-11	CARBON	
R6006	1-216-430-11	METAL OXIDE	390 5% 1W	< CONNECTOR >			
R6007	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R6008	1-216-845-11	RES-CHIP	
R6008	1-216-845-11	RES-CHIP	100K 5% 1/16W	R6015	1-219-776-11	CARBON	
R6015	1-219-776-11	CARBON	2.2M 10% 1/2W	< CONNECTOR >			
R6036	1-218-715-11	METAL CHIP	9.1K 0.5% 1/16W	R6037	1-215-481-00	METAL	CN9201* 1-564-520-11 PLUG, CONNECTOR 5P
R6037	1-215-481-00	METAL	330K 1% 1/4W	< CONNECTOR >			
							CN9202 1-564-521-11 PLUG, CONNECTOR 6P

Les composants identifiés par une trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

H2

H1

H3

REF. NO.	PART NO.	DESCRIPTION	REMARK			REF. NO.	PART NO.	DESCRIPTION	REMARK					
< RESISTOR >														
R9201	1-218-684-11	METAL CHIP	470	0.5%	1/16W			* A-1372-933-A H3 BOARD, COMPLETE						
R9202	1-218-684-11	METAL CHIP	470	0.5%	1/16W			*****						
R9203	1-218-684-11	METAL CHIP	470	0.5%	1/16W				< CAPACITOR >					
R9204	1-218-684-11	METAL CHIP	470	0.5%	1/16W	C9301	1-126-964-11	ELECT	10UF	20%	50V			
R9205	1-218-688-11	METAL CHIP	680	0.5%	1/16W	C9302	1-126-964-11	ELECT	10UF	20%	50V			
R9206	1-218-688-11	METAL CHIP	680	0.5%	1/16W	C9303	1-126-959-11	ELECT	0.47UF	20%	50V			
R9207	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C9304	1-126-959-11	ELECT	0.47UF	20%	50V			
R9208	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W	C9305	1-163-021-91	CERAMIC CHIP	0.01UF	10%	50V			
R9209	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W				< CONNECTOR >					
R9210	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W				CN9301* 1-564-526-11 PLUG, CONNECTOR 11P					
R9211	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W				< DIODE >					
< SWITCH >														
S9201	1-572-198-11	SWITCH, KEYBOARD				D9301	8-719-110-17	RD10ESB2						
S9202	1-572-198-11	SWITCH, KEYBOARD				D9302	8-719-110-17	RD10ESB2						
S9203	1-572-198-11	SWITCH, KEYBOARD				D9303	8-719-110-17	RD10ESB2						
S9204	1-572-198-11	SWITCH, KEYBOARD				D9304	8-719-110-17	RD10ESB2						
S9205	1-572-198-11	SWITCH, KEYBOARD				D9305	8-719-110-17	RD10ESB2						
S9206	1-572-198-11	SWITCH, KEYBOARD				D9306	8-719-110-17	RD10ESB2						
S9207	1-572-198-11	SWITCH, KEYBOARD							< JACK >					
S9208	1-572-198-11	SWITCH, KEYBOARD				J9301	1-565-929-11	TERMINAL BLOCK, S 3P						
S9209	1-572-198-11	SWITCH, KEYBOARD							< RESISTOR >					
S9210	1-572-198-11	SWITCH, KEYBOARD				R9301	1-216-821-11	RES-CHIP	1K	5%	1/16W			
S9211	1-572-198-11	SWITCH, KEYBOARD				R9302	1-216-853-11	RES-CHIP	470K	5%	1/16W			
S9212	1-572-198-11	SWITCH, KEYBOARD				R9303	1-216-853-11	RES-CHIP	470K	5%	1/16W			

* A-1377-041-A H1 BOARD, COMPLETE														

< CAPACITOR >														
C9101	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V				MISCELLANEOUS					

< CONNECTOR >														
CN9101* 1-564-508-11 PLUG, CONNECTOR 5P														
CN9102* 1-564-506-11 PLUG, CONNECTOR 3P														
< DIODE >														
D9101	8-719-053-43	SLR-325VCT31							\triangle 1-223-925-11 RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)					
D9102	8-719-053-43	SLR-325VCT31							\triangle 1-451-535-11 COIL ASSY, VM					
< IC >														
IC9101 8-719-066-43 GP1U28Y														
< RESISTOR >														
R9101	1-216-833-11	RES-CHIP	10K	5%	1/16W				\triangle 1-451-537-11 DEFLECTION YOKE					
R9102	1-216-809-11	RES-CHIP	100	5%	1/16W				1-529-403-31 SPEAKER (6.6cm)					
R9103	1-216-813-11	RES-CHIP	220	5%	1/16W				1-544-894-11 SPEAKER (13cm)					
R9104	1-216-813-11	RES-CHIP	220	5%	1/16W				*					
< SWITCH >														
S9101	1-571-532-21	SWITCH, TACTIL							* 1-556-945-21 CABLE, P-P					

<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
ACCESSORIES & PACKING MATERIALS			

	* 4-041-426-01	BAG, PROTECTION (51HW40)	
	* 4-042-463-01	SHEET, PROTECTION	
	* 4-076-420-01	BAG, PROTECTION (57HW40)	
	* 4-081-682-01	TRAY (51HW40)	
	* 4-081-683-01	INDIVIDUAL CARTON (51HW40)	
	* 4-081-684-01	CUSHION (UPPER) (51HW40)	
	* 4-081-685-01	CUSHION (LOWER) (51HW40)	
	* 4-081-708-01	INDIVIDUAL CARTON (57HW40)	
	* 4-081-709-01	TRAY (57HW40)	
	* 4-081-710-01	CUSHION (UPPER) (57HW40)	
	* 4-081-711-01	CUSHION (LOWER) (57HW40)	
	4-084-488-11	MANUAL, INSTRUCTION	
	4-084-488-21	MANUAL, INSTRUCTION	
	4-084-488-31	MANUAL, INSTRUCTION	

REMOTE COMMANDER			

	1-476-864-11	REMOTE COMMANDER (RM-Y909)	
	4-081-888-01	LID, BATTERY CASE	

WARNING

To prevent fire or shock hazard, do not expose the projection TV to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

CAUTION

When using TV games, computers, and similar products with your projection TV, or viewing a TV station whose logo always stays on the screen, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern such as a station logo is left on the screen for long periods of time, especially at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

Note on convergence adjustment

Before you use your projection TV, make sure to adjust convergence. For details, see “Adjusting the Convergence Automatically – FLASH FOCUS™” on page 33.

Note to CATV system installer

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF, VHF, transmitted by cable companies or satellite for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antennas.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty and your authority to operate this equipment.

CAUTION

How to reduce the risk of “Image Retention” on your Projection TV

Bright, stationary images such as TV station logos displayed on your TV can cause permanent damage to your TV, resulting in retention of the image in the picture.

Please take the following steps to reduce the risk of causing image retention:

View a variety of program sources or programming material.

Image retention can occur when bright stationary images such as TV station logos are viewed. Changing the program material viewed reduces the possibility that a single image will become imprinted on the picture tubes in your TV.

When viewing programs with stationary images, adjust the picture setting to reduce the “Picture” and “Brightness” levels. Image retention is accelerated by higher “Brightness” and higher “Picture” settings.

Please refer to your instruction manual for instructions on adjusting picture settings.

This will help you reduce the risk of causing image retention.

IMAGE RETENTION IS NOT COVERED BY YOUR WARRANTY

This document is for the remote control RM-Y909.

MODELS: KP-51HW40, KP-57HW40

Please keep this notice with the instruction manual.

Safety

- Operate the projection TV only on 120 V AC.
- The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- If any liquid or solid object should fall inside the cabinet, unplug the projection TV immediately and have it checked by qualified service personnel before operating it further.
- If you will not be using the projection TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.

For details concerning safety precautions, see “Important Safeguards” on page 4.

Installing

- To prevent internal heat buildup, do not block the ventilation openings.
- Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

- Avoid operating the projection TV at temperature below 5°C (41°F).
- If the projection TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color. In this case, please wait a few hours to let the moisture evaporate before turning on the projection TV.
- To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of a reflective material.



As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

ENERGY STAR® is a U.S. registered mark.

TruSurround and the (●) symbol are trademarks of SRS Labs, Inc.

TruSurround technology is incorporated under license from SRS Labs, Inc.

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

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XBR and CineMotion are trademarks of Sony.

BBE and BBE Symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

ATTENTION

Pour prévenir les chocs électriques, ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être inserées à fond sans en laisser aucune partie à découvert.

Owner's Record

The model and serial numbers are located at the rear of the projection TV, below the Sony logo, on the sticker, and also on the TV box (white label). Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____

Serial No. _____

Important Safeguards

For your protection, please read these instructions completely, and keep this manual for future reference. Carefully observe and comply with all warnings, cautions and instructions placed on the set or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use and servicing of the set.

Use

Power Sources

This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.



Grounding or Polarization

This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding). Follow the instructions below:

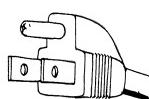
For the set with a polarized AC power cord plug

This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.



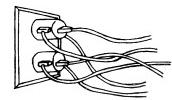
Alternate Warning for the set with a three-wire grounding type AC plug

This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.



Overloading

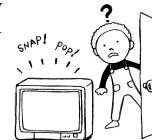
Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.



Always turn the set off when it is not being used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.



If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.



Object and Liquid Entry

Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.



Attachments

Do not use attachments not recommended by the manufacturer, as they may cause hazards.



Cleaning

Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and warm water. Never use strong solvents such as thinner or benzine for cleaning.



If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

Installation

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



Accessories

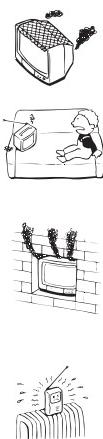
Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by the manufacturer for the specific model of projection TV. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



Ventilation

The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.

- ❑ Never cover the slots and openings with a cloth or other materials.
- ❑ Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.
- ❑ Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.
- ❑ Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.



Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.



Antennas

Outdoor Antenna Grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

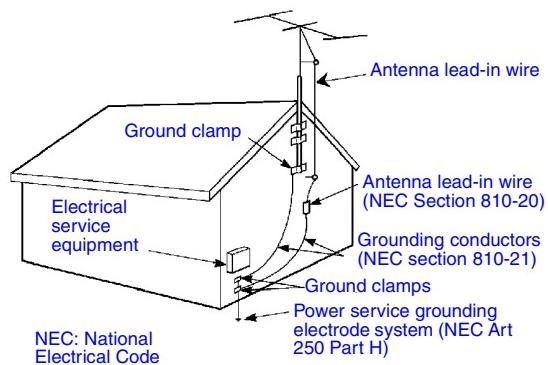
WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INvariably FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the NEC

Refer to section 54-300 of Canadian Electrical Code for Antenna Grounding.



Lightning

For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power cord or plug is damaged or frayed.
- If liquid has been spilled into the set.
- If the set has been exposed to rain or water.
- If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.
- If the set does not operate normally when following the operating instructions.
Adjust only those controls that are specified in the operating instructions.
Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.
- When the set exhibits a distinct change in performance, it indicates a need for service.



Servicing

Do not attempt to service the set by yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.

Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.



For Safety

Be careful when moving the projection TV

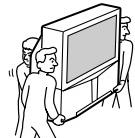
When you place the projection TV in position, be careful not to drop it on your foot or fingers.



Watch your footing while installing the projection TV.

Carry the projection TV in the specified manner

If you carry the projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.



- Carry the projection TV with the specified number of persons. (see page 10)
- Do not carry the projection TV holding the speaker grill.
- Hold the projection TV tightly when carrying it.
-

Contents

Introducing the Sony Projection TV

Presenting the Sony Projection TV	8
Using this manual	9

Installing and Connecting the Projection TV

Contents	10
Inserting Batteries into the Remote Control	10
Carrying Your Projection TV	10
Installing the Projection TV	11
Connector Types	12
Projection TV Controls and Connectors	13
Basic Connections (Connecting Cable TV or Antenna).....	16
Connecting a VCR and Cable	19
Connecting a VCR and Cable Box	20
Connecting Two VCRs for Tape Editing	22
Connecting a Satellite Receiver	23
Connecting a Satellite Receiver with a VCR	24
Connecting an Audio Receiver	25
Connecting a DVD Player with Component Video Connectors	26
Connecting a DVD Player with A/V Connectors ..	27
Connecting a Digital TV Receiver.....	28
Connecting a Camcorder	29
Connecting an AV Receiver	30
Using the CONTROL S Feature	31
Setting Up the Projection TV Automatically.....	32
Adjusting the Convergence Automatically – FLASH FOCUS™ –	33

Using the Features

Using the Remote Control	34
Watching the TV	37
Watching the Digital TV.....	39
Using Favorite Channels.....	40
Using Twin View™	41
Using the Freeze Function	44
Using Scrolling Channel Index	45
Using Wide Screen Mode	47

Using the Menus

Overview.....	48
Using the Video Menu.....	49
Using the Audio Menu.....	51
Using the Channel Menu	53
Using the Wide Menu	55
Using the Timer Menu.....	57
Using the Setup Menu	58

Other Information

Programming the Remote Control.....	68
Operating Other Components with Your Projection TV Remote Control	71
Troubleshooting	73
Specifications.....	76

Introducing the Sony Projection TV

Presenting the Sony Projection TV

Thank you for purchasing the Sony Projection TV.
This manual is for models KP-51HW40 and KP-57HW40.
Model KP-51HW40 is used for illustration purposes.

Features

Some of the features that you will enjoy with your new projection TV include:

- Hi Scan 1080TM**: Enables you to receive the 1080i, 720p, 480p and 480i digital TV formats. By using the VIDEO 5/6 IN jacks, you can connect a DTV (digital television) receiver to view DTV programs.
- DRCTM Multi-Function**: Unlike conventional line doublers, the DRC feature doubles vertical and horizontal lines, resulting in four times the density for quality sources such as DVD, Satellite and Digital camcorder.
- CineMotionTM**: Using the 2-3 Pull-Down technology, the CineMotion feature allows you to obtain a smooth picture movement when playing back movies or other video sources on film.
- Twin ViewTM**: Using Multi-Image Driver (MID-X), Twin View allows you to watch two programs side by side with the ability to zoom in on one picture and listen to the program in the selected window. You can watch pictures from two different sources (1080i, 720p, 480p or 480i) simultaneously.
- Steady SoundTM**: Equalizes volume levels so there is consistent output between programs and commercials.
- Parental Control**: V-Chip technology allows parents to block unsuitable programming for younger viewers.
- Component Video Inputs**: Offers the best video quality for DVD (480p, 480i) and Digital Set-top box (1080i, 720p, 480p, 480i) connections.
- S-VIDEO Inputs**: Provides a high-quality image for connected equipment.
- Favorite Channel Preview**: Preview up to eight favorite channels without leaving the current channel.
- Scrolling Channel Index**: Allows you to view and choose channels from scrolling pictures without leaving the current channel.

- Wide Screen Mode:** Allows you to watch 4:3 normal broadcasts in wide screen mode (16:9 aspect ratio).
- Auto Wide:** Allows you to select the wide screen mode automatically.
- Flash Focus™:** Allows you to adjust convergence automatically.

Using this manual

We recommend that you carefully review the contents of the following three sections in the order shown to ensure that you fully understand the operation of your new projection TV.

1 Installing and Connecting the Projection TV

This section guides you through your initial setup. It shows you how to install your projection TV, to connect your new components and to connect the antenna and cable.

2 Using the Features

This section shows you how to begin using your new projection TV. It also shows you how to use your remote control functions.

3 Using the menus

This section teaches you how to access on-screen menus and adjust your projection TV settings.

Instructions in this manual are written for the remote control. Similar controls are also found on the projection TV console.

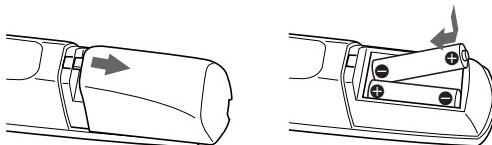
Installing and Connecting the Projection TV

Contents

The box contains your new projection TV, a remote control and two AA batteries. No peripheral cables are included. If you intend to add additional equipment to your projectionTV, please check the hookup instructions for your desired setup before you begin. You may need to purchase cables and/or splitters to complete the hookup properly.

Inserting Batteries into the Remote Control

Insert two size AA (R6) batteries (supplied) by matching the + and – on the batteries to the diagram inside the battery compartment.



- ☞ Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.
- ☞ Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.
- ☞ Your remote control can be programmed to operate most video equipment. (See “Programming the Remote Control” on page 68.)

Carrying Your Projection TV

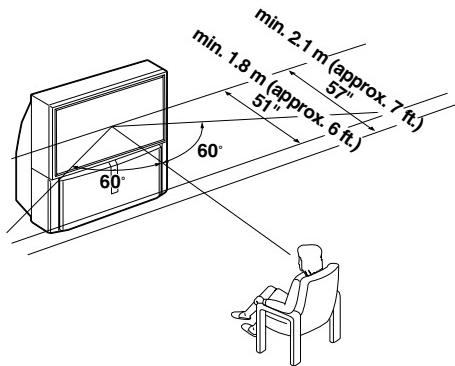
Carrying the projection TV requires three (3) or more people.

The projection TV has been equipped with casters for easy movement on a hard surface.

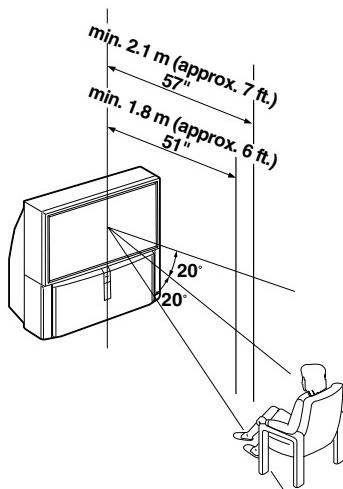
Please move your projection TV using the casters.

Installing the Projection TV

Recommended viewing area (Horizontal)



Recommended viewing area (Vertical)



Connector Types

You may find it necessary to use some of the following connector types during set up.

Coaxial cable

Standard TV cable and antenna cable

Plug Type



Screw-on Type



S Video cable

High quality video cable for enhanced picture quality



Audio/Video cable



Video - Yellow

Audio (Left) - White

Audio (Right) - Red

Some DVD Players are equipped with the following three video connectors:

Y - Green

P_B (C_B, C_b or B-Y) - Blue

P_R (C_R, C_r or R-Y) - Red

CONTROL S cable

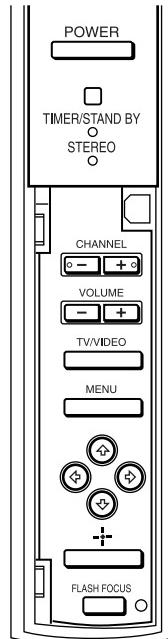
CONTROL S connections are exclusive to Sony products and allow greater control of all Sony equipment.



Projection TV Controls and Connectors

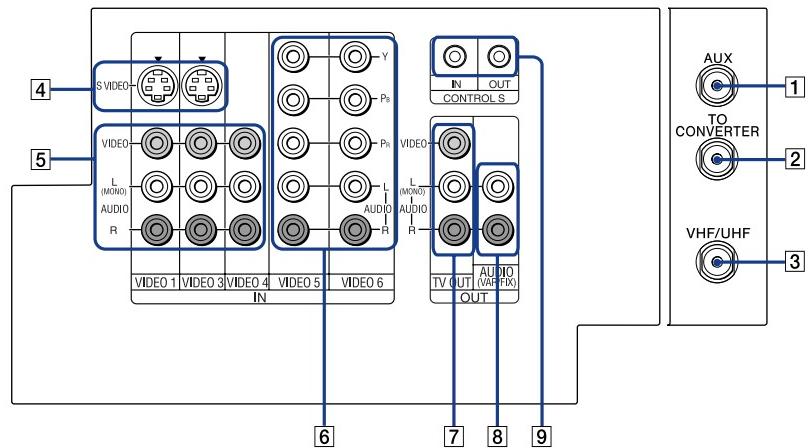
Front Panel Menu Controls

The front panel menu controls allow access to the on-screen menus without the use of a remote control. Pressing MENU brings up the on-screen menus. The arrow buttons move the on-screen cursor in the menus and by pressing the Select button (•) selects the menu item.

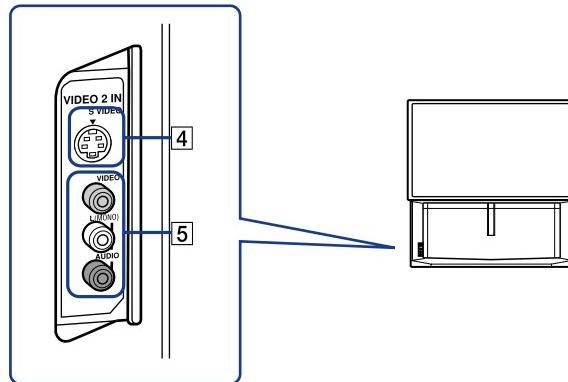


Projection TV Rear and Front Panel Connectors

Rear of projection TV



Front of projection TV



Connection	Description
[1] AUX	Allows you to view local and cable channels if your cable provider does not feature local channels. You can switch between local and cable channels easily by pressing ANT on the remote control. Devices connected to the AUX input cannot be viewed in Twin View.
[2] TO CONVERTER	This is a VHF/UHF OUT jack that lets you set up your projection TV to switch between scrambled channels (through a cable box) and normal cable channels (CATV). Use this jack instead of a splitter to get better picture quality when switching between scrambled and unscrambled cable channels.
[3] VHF/UHF	Connects to your VHF/UHF antenna or cable.
[4] S VIDEO (Rear and front)	Connects to the S VIDEO OUT jack of your VCR or other S VIDEO-equipped video component. Provides better picture quality than the VHF/UHF jacks or the Video IN jack.
[5] VIDEO (L/R)/AUDIO (Rear and front)	Connects to the audio and video OUT jacks on your VCR or other video component. A fourth video input (VIDEO 2) is located on the front panel of the projection TV.
[6] Y/P_B/P_R (L/R)/AUDIO	Connects to your DVD player's or Digital Set-top box's component video (Y, PB, PR) and audio (L/R) jacks.
[7] TV OUT	Connects to an AV receiver for greater control of all audio and video equipment (see page 30). For detailed information about connection, refer to the operating manual supplied with the AV receiver.
[8] AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio inputs of your audio or video component.
[9] CONTROL S IN/OUT	To control other Sony equipment with the projection TV's remote control, connect the CONTROL S IN jack of the equipment to the CONTROL S OUT jack on the projection TV with the CONTROL S cable. To control the projection TV with a remote control for another Sony product, connect the CONTROL S OUT jack of the equipment to the CONTROL S IN jack on the projection TV with the CONTROL S cable.

Basic Connections (Connecting Cable TV or Antenna)

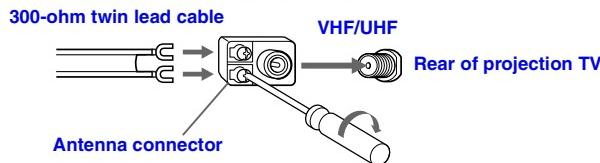
Connecting Directly to Cable or an Antenna

The connection you choose depends on the cable found in your home. Newer homes are equipped with standard coaxial cable (see **A**); older homes probably have 300-ohm twin lead cable (see **B**); other homes may contain both (see **C**).

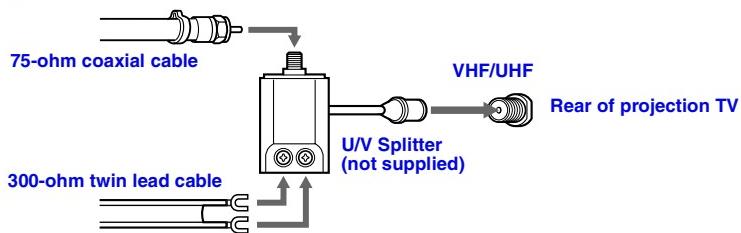
A VHF Only or VHF/UHF or Cable



B VHF Only or UHF Only or VHF/UHF

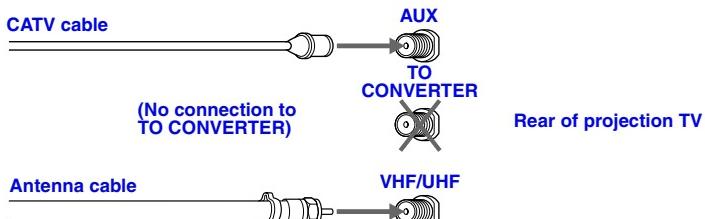


C VHF and UHF



Cable and Antenna

If your cable provider does not feature local channels, you may find this set up convenient.



Select CABLE or antenna (ANT) mode by pressing ANT on the remote control.

To receive channels with an antenna, you need to turn your Cable to OFF (see page 53) and perform the Auto Program function (see page 54).

Cable Box Connections

Cable Box and Cable

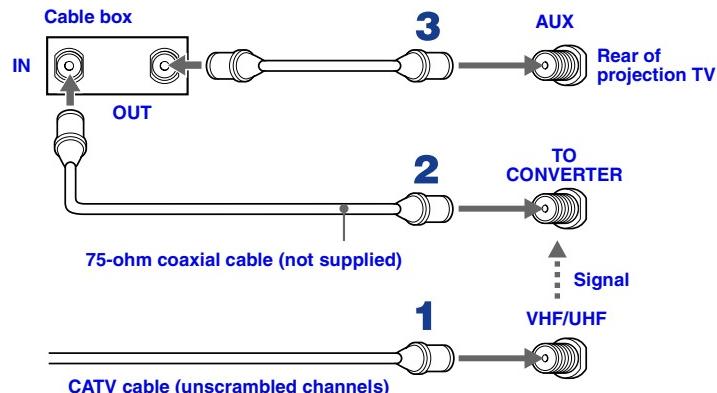
This is the preferred basic cable TV hookup to use if:

- Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- You want to enjoy the Twin View feature.

With this setup you can:

- Use the projection TV remote control to change channels using your cable box when the signal is scrambled.
- Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. (Your projection TV's tuner provides a better signal than the cable box.)
- Use the Twin View feature. (When all channels are routed through your cable box, only one channel is sent to the projection TV, so you can not use the Twin View or Channel Index features for your cable box.)

- 1** Connect the Cable TV cable to the projection TV's VHF/UHF jack.
- 2** Using a coaxial cable, connect the projection TV's TO CONVERTER jack to the cable box's IN jack. The projection TV's internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
- 3** Using a coaxial cable, connect the cable box's OUT jack to the projection TV's AUX jack.



 Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the TV (unscrambled).

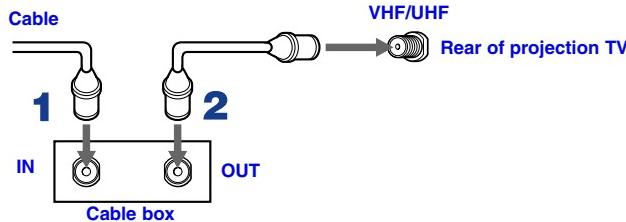
Cable Box Only

Use this hookup if:

- You subscribe to a cable TV system that uses scrambled or encoded signals requiring a cable box to view all channels, and
- You do not intend to hook up any other audio or video equipment to your projection TV.

When all channels are routed through your cable box, only one unscrambled channel is sent to the projection TV, so you cannot use the Twin View feature. If some channels are scrambled, but others are not, consider using the hookup on page 17 instead.

- 1** Connect the coaxial connector from your cable service to the cable box's IN jack.
- 2** Using a coaxial cable, connect the cable box's OUT jack to the TV's VHF/UHF jack.



Also, set Cable to ON in the Channel menu (see page 53).

 Setting the Channel Fix feature in the Channel menu (see "Using the Channel Menu" on page 53), ensures that you do not accidentally switch the channels using your projection TV.

-  Your Sony remote control can be programmed to operate your cable box (see "Programming the Remote Control" on page 68).
-  To change channels using the cable box, set your projection TV to channel 3 or 4 depending on the cable box channel output. If you will be controlling all channel selection through your cable box, consider using the Channel Fix feature to set your projection TV to channel 3 or 4 (see page 54).

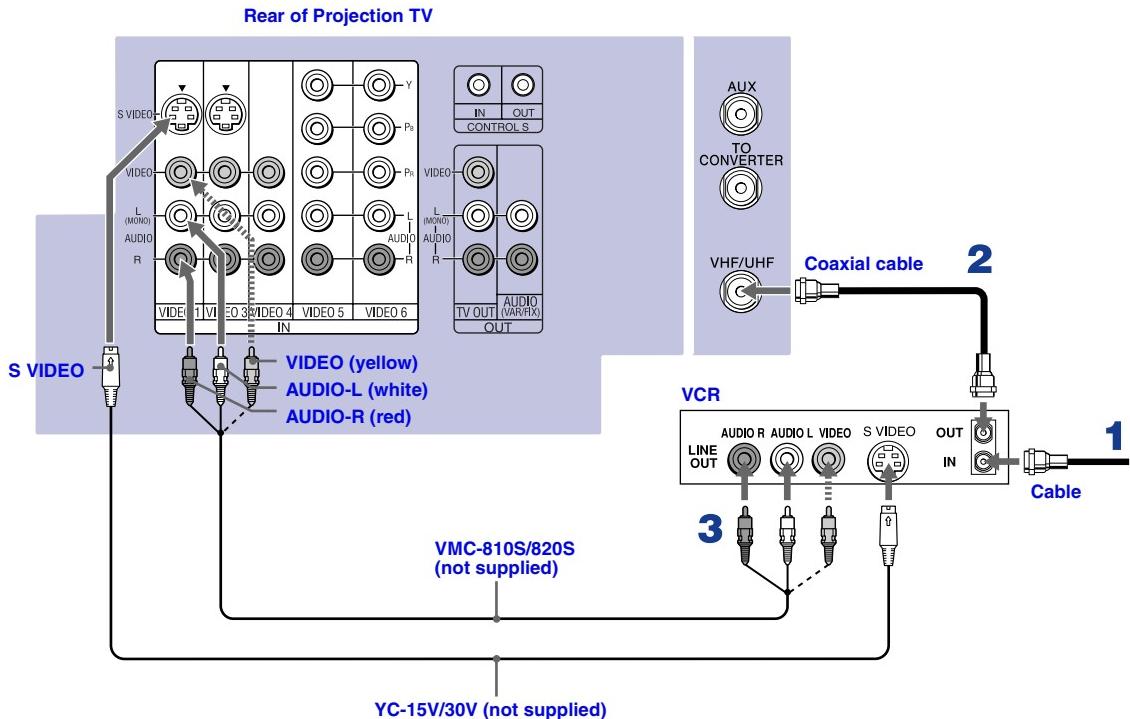
Connecting a VCR and Cable

Use this hookup if:

- You have cable TV that does not require a cable box.

Disconnect all power sources before making any connections.

- 1** Connect the cable TV cable to the VCR's IN jack.
- 2** Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
- 3** Using AUDIO and S VIDEO cables, connect the VCR's Audio and S Video OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.



If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a VCR and Cable Box

Use this hookup if:

- Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- You want to enjoy the Twin View feature.

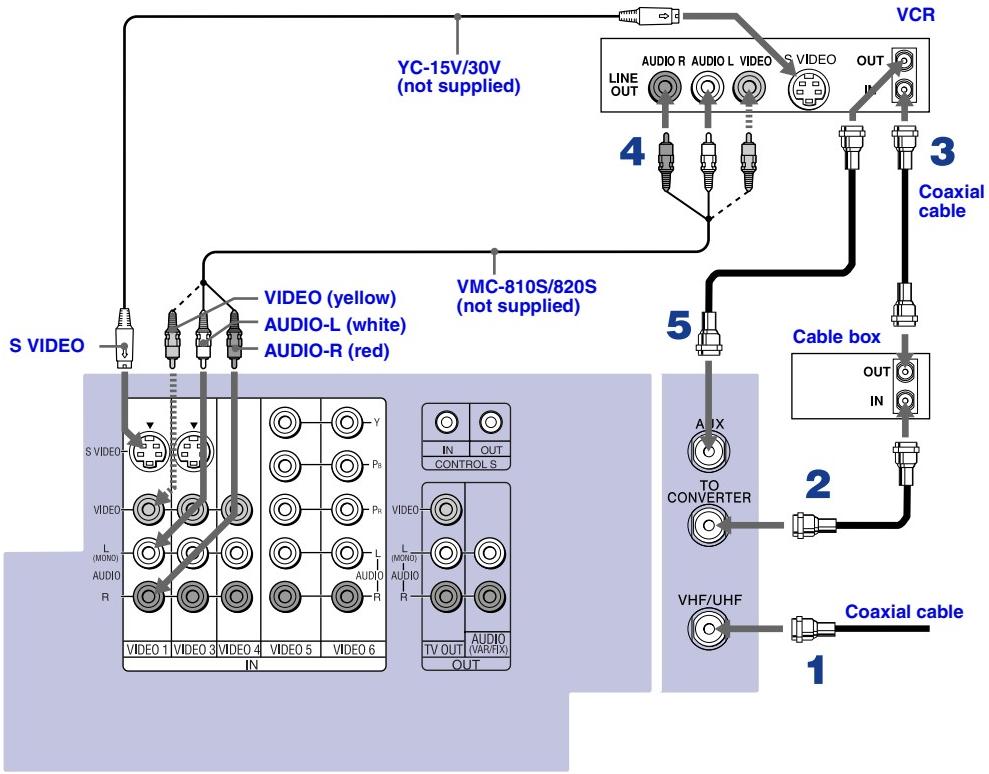
With this setup you can:

- Use the projection TV remote control to change channels on your cable box when the signal is scrambled. To program your Sony remote control to operate your cable box, See “Programming the Remote Control” on page 68.
- Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. Your projection TV’s tuner provides a better signal than the cable box.
- Use the Twin View feature. (When all channels are routed through your cable box, only one signal is sent to the projection TV, so you cannot use the Twin View feature.)

Disconnect all power sources before making any connections.

- 1** Connect the Cable TV cable to the projection TV’s VHF/UHF jack.
- 2** Using a coaxial cable, connect the TV’s TO CONVERTER jack to the cable box’s IN jack. The projection TV’s internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
- 3** Using a coaxial cable, connect the cable box’s OUT jack to the VCR’s IN jack.
- 4** Using AUDIO and S VIDEO cables, connect the VCR’s AUDIO and S VIDEO OUT jacks to the projection TV’s AUDIO and S VIDEO IN jacks.
- 5** Using a coaxial cable, connect the VCR’s OUT jack to the projection TV’s AUX jack.

 To view scrambled channels, set your projection TV to AUX 3 or 4 (depending on your cable box output). Change channels using your cable box.



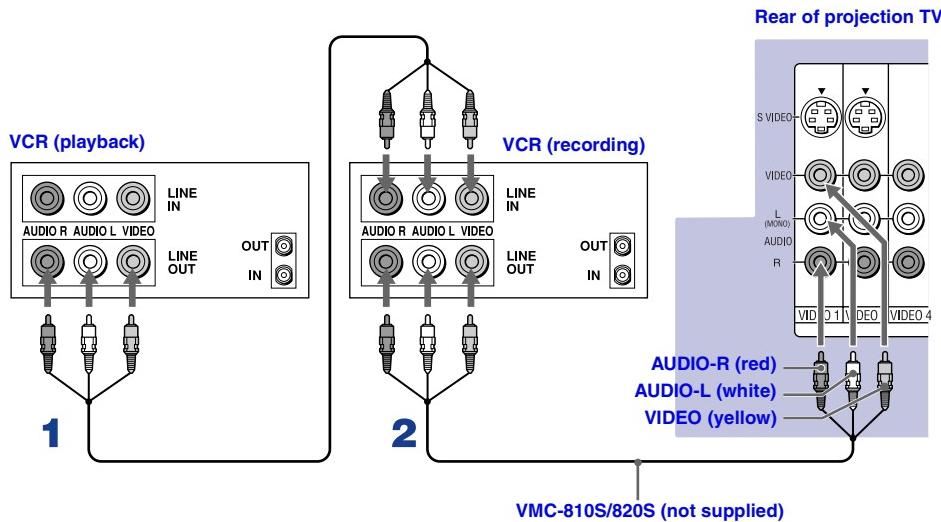
- ☞ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.
- ☞ You will not be able to change channels on the VCR. Set your projection TV and VCR to channel 3 or 4, depending on your cable box channel output.
- ☞ Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the projection TV (unscrambled).

Connecting Two VCRs for Tape Editing

If you connect two VCRs, you can record from one VCR to the other while using your projection TV to monitor what is being recorded.

Disconnect all power sources before making any connections.

- 1** Using AUDIO and VIDEO cables, connect the playback VCR's Audio and Video OUT jacks to the recording VCR's Audio and Video IN jacks.
- 2** Using AUDIO and VIDEO cables, connect the recording VCR's AUDIO and Video OUT jacks to the projection TV's AUDIO and VIDEO IN jacks.



- ☞ To perform tape editing, set the projection TV to the video input intended for playback by pressing TV/VIDEO on the remote control.
- ☞ You may need to change the video input on your VCR. Consult your VCR's operating manual for instructions.
- ☞ If your VCRs have an S VIDEO jack: For best picture quality, use an S VIDEO connection instead of the yellow video cable on your combined A/V cable.
Using an S VIDEO cable, connect the playback VCR's S VIDEO OUT jack to the recording VCR's S VIDEO IN jack. S VIDEO does not provide audio, so audio cables must be connected to provide sound.
- ☞ You cannot record signals from equipment connected to the Y, P_B, P_R input.

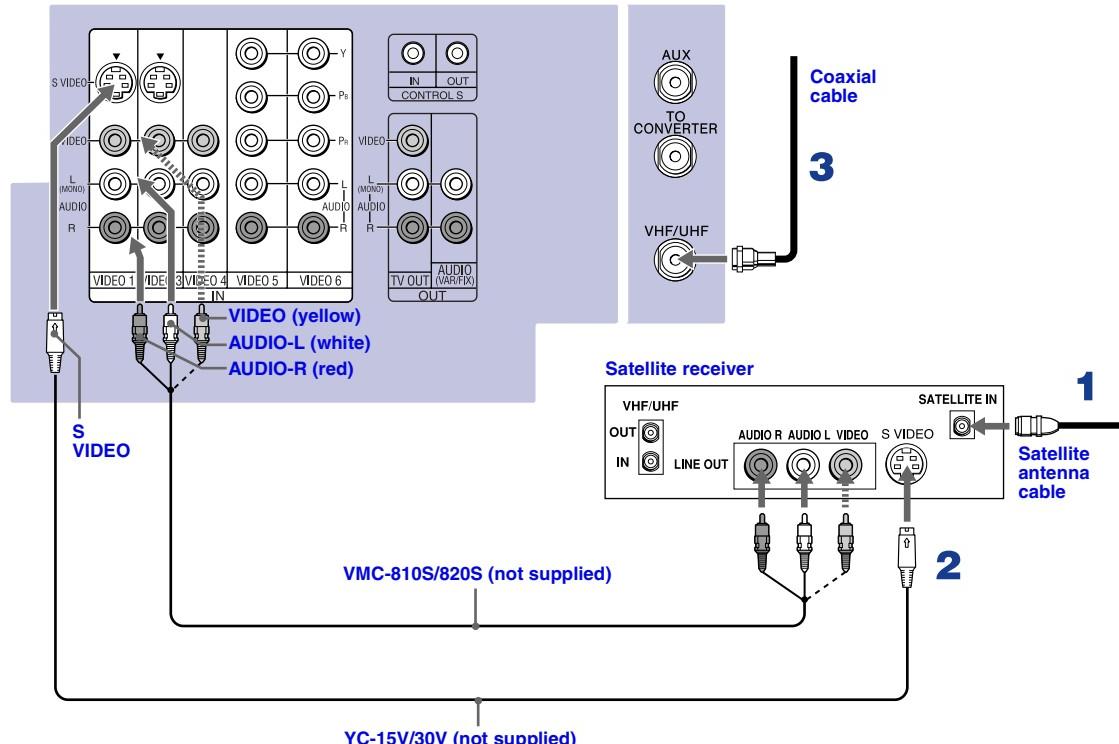
Connecting a Satellite Receiver

Disconnect all power sources before making any connections.

- 1 Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
- 2 Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.
- 3 Connect a coaxial cable from your cable or antenna to the projection TV's VHF/UHF jack.

 If your satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

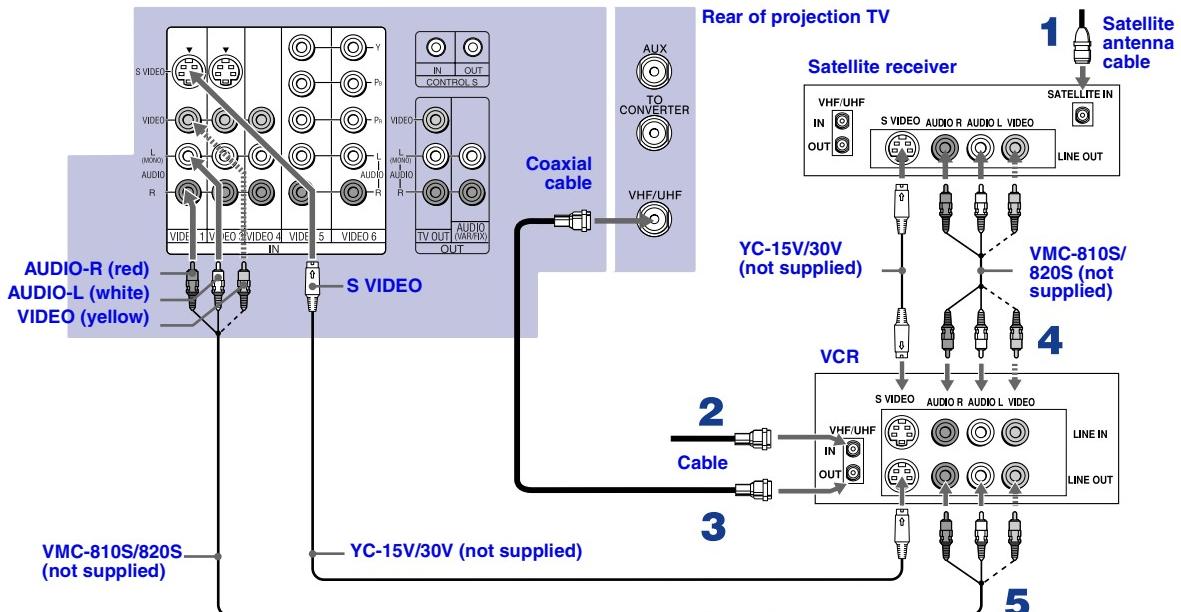
Rear of projection TV



Connecting a Satellite Receiver with a VCR

Disconnect all power sources before making any connections.

- 1 Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
- 2 Connect the CATV cable to the VCR's VHF/UHF IN jack.
- 3 Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
- 4 Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the VCR's AUDIO and S VIDEO IN jacks.
- 5 Using AUDIO and S VIDEO cables, connect the VCR's AUDIO and S VIDEO OUT jacks to the TV's AUDIO and S VIDEO IN jacks.



Be sure your VCR's video input is set correctly. Consult your VCR's operating manual for instructions.

Use TV/VIDEO to select
 - VIDEO 1 to watch satellite TV or the VCR (your VCR must be turned on).
 - VHF/UHF to watch cable TV.

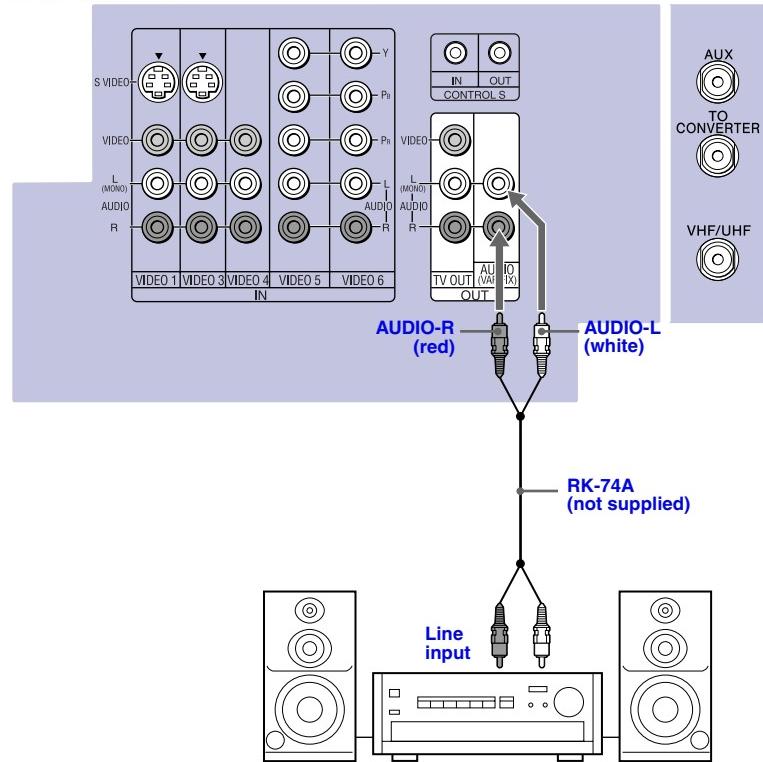
If your VCR or satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting an Audio Receiver

Disconnect all power sources before making any connections.

Using audio cables, connect the projection TV's AUDIO OUT(VAR/FIX) jacks to the audio receiver's audio LINE IN jacks.

Rear of projection TV



Connecting a DVD Player with Component Video Connectors

This is the preferred hookup to use if:

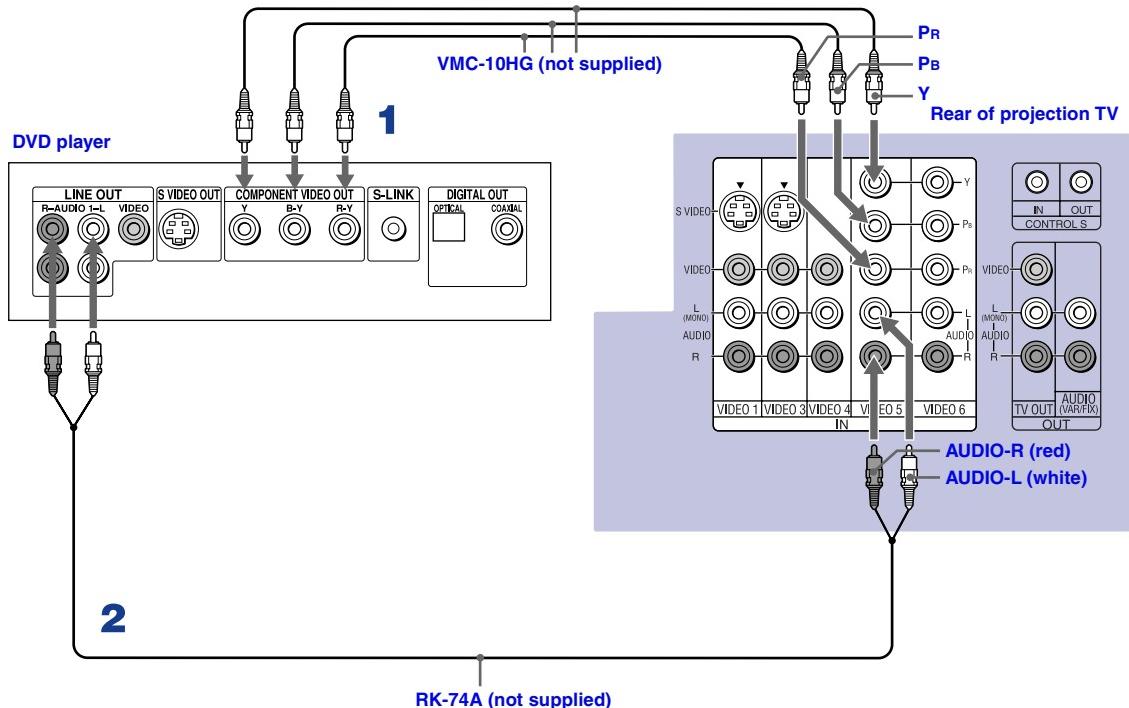
- Your DVD player has component (Y, B-Y, R-Y) jacks.

Disconnect all power sources before making any connections.

- 1** Using three separate component video cables, connect the DVD player's Y, B-Y and R-Y jacks to the Y, PB and PR jacks on the projection TV. Use the VIDEO IN 5 or 6 connections.

 The Y, B-Y and R-Y jacks on your DVD player are sometimes labeled Y, C_B and C_R, or Y, Pb and Pr. If so, connect the cables to like colors.

- 2** Using an audio cable, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks. Be sure to use the same row of inputs that you used for the video connection (VIDEO IN 5 or 6).



Connecting a DVD Player with A/V Connectors

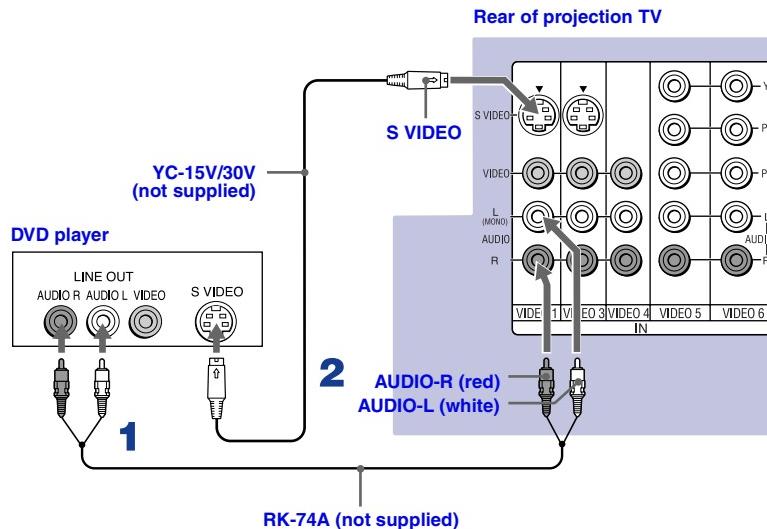
Use this hookup if:

- Your DVD player does not have component (Y, Pb, Pr) jacks.

 If your DVD player has video component output connectors: for best picture quality use the connection described on page 26.

Disconnect all power sources before making any connections.

- 1** Using audio cables, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks.
- 2** Using an S VIDEO cable, connect the DVD player's S VIDEO jack to the projection TV's S VIDEO jack.



 Use TV/VIDEO on the remote control to switch between the VCR, DVD player and cable TV inputs.

 If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a Digital TV Receiver

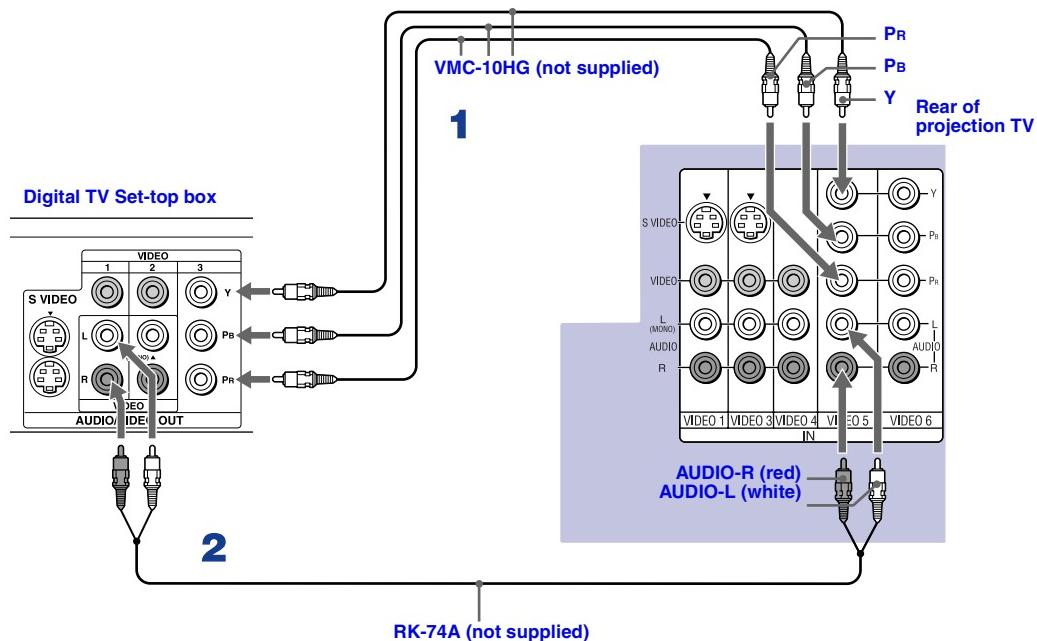
Disconnect all power sources before making any connections.

 Be sure to read the Set-top box manual.

- 1** Using three separate component video cables, connect the Digital TV Set-top box's Y, Pb and Pr jacks to the projection TV.

 The Y, Pb and Pr jacks do not provide audio, so audio cables must be connected to provide sound.
 Component video connection is necessary to view 480p, 720p, and 1080i formats. You may also use the S VIDEO or Composite Video connections, however, component video (Y, Pb, Pr) will provide the best picture quality for all format types.

- 2** Using an audio cable, connect the Digital TV Set-top box's Audio OUT jacks to the projection TV's AUDIO IN jacks.



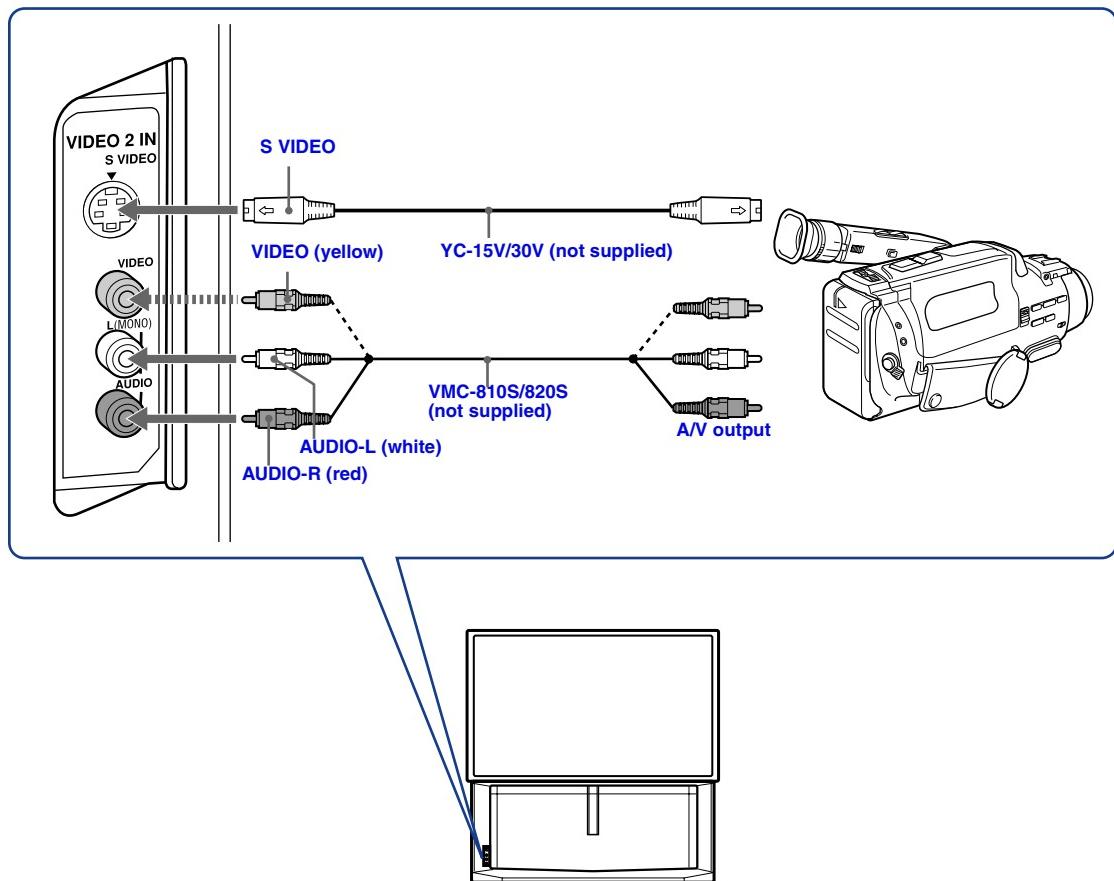
 You cannot record the signal from any equipment connected into the Y, Pb and Pr connectors.
 This projection TV is not compatible with digital TV receivers configured with RGB or VGA output connectors.

Connecting a Camcorder

For easy connection of the camcorder, the projection TV has front Audio and Video inputs (shown below). However, if you prefer, you can also connect the camcorder to the projection TV's rear Audio and Video IN jacks.

Using AUDIO and S VIDEO cables, connect the camcorder's Audio and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.

- ☞ If you have a mono camcorder, connect its left audio output to the projection TV's AUDIO L (MONO) jack.
- ☞ If your camcorder is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



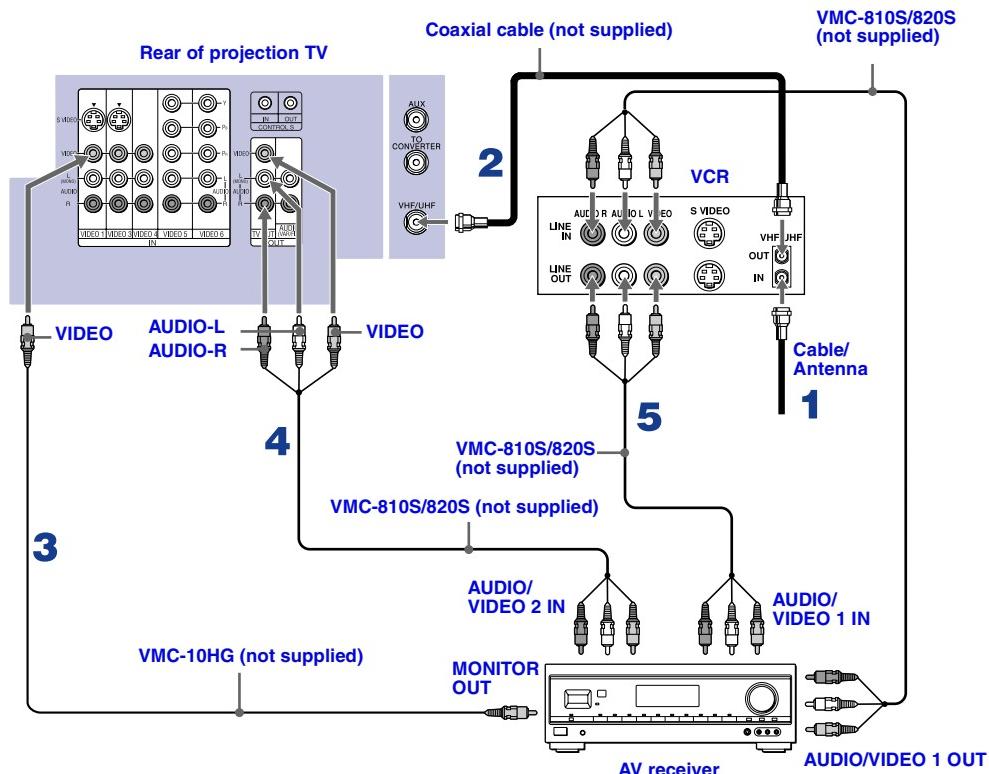
Connecting an AV Receiver

For greater control of all audio and video equipment, connect an AV receiver.

 Change “Video Label” for the VIDEO 1 input to “Receiver” (see page 59).

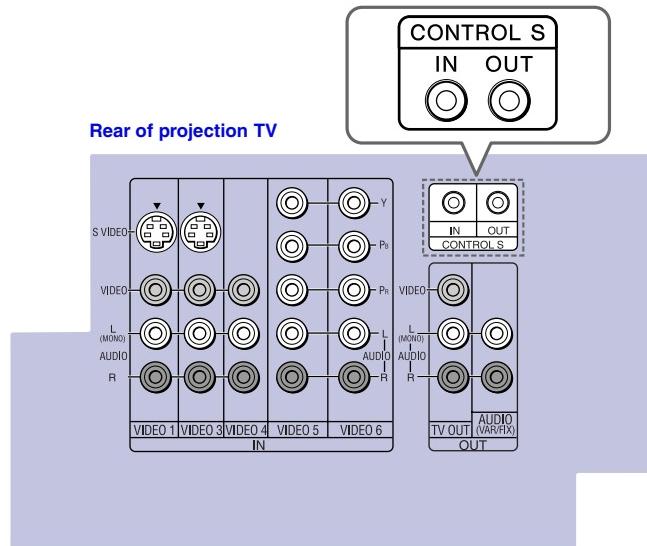
Disconnect all power sources before making any connections.

- 1 Connect the coaxial cable from the incoming cable connection or antenna to IN on the VCR.
- 2 Using a coaxial cable, connect OUT on the VCR to VHF/UHF on the projection TV.
- 3 Using a VIDEO cable, connect VIDEO of VIDEO 1 IN on the projection TV to MONITOR OUT on the AV receiver.
- 4 Using an AUDIO/VIDEO cable, connect TV OUT on the projection TV to AUDIO/VIDEO 2 IN on the AV receiver.
- 5 Using an AUDIO/VIDEO cable, connect the video equipment to the AV receiver.
- 6 Select the Setup menu and set “Video Label” to “Receiver” to fix your TV’s input to AV receiver (see “Video Label” on page 59).



Using the CONTROL S Feature

CONTROL S allows you to control your projection TV system and other Sony equipment with one remote control. In addition to allowing you to control multiple devices with one remote control, the CONTROL S feature allows you to always point your remote control at your projection TV, instead of having to point it at the other equipment, which might be hidden or out of direct line of sight.



Setting Up the Projection TV Automatically

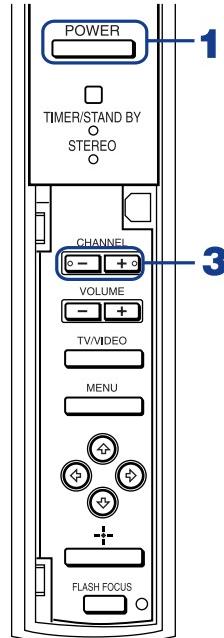
After you finish connecting your projection TV, you can run Auto Setup to set up your channels. The Auto Setup screen appears when you turn your projection TV on for the first time after installing it. If you do not want to set up the channels at this time, you can do it later by using the Auto Program feature in the Channel menu (see page 54).

 The Auto Setup feature does not apply for installations that use a cable box for all channel selection.

Using Auto Setup

- 1** Press POWER on the front panel of your projection TV or on the remote control to turn on the projection TV.
- 2** Press the TV (FUNCTION) button on your remote control. Red light will briefly appear.
- 3** Press CH+ on your projection TV to run Auto Setup, or press CH- to exit. If you use the channel buttons on your remote control, be sure to use the main set of buttons ().

Projection TV front panel



 You can run Auto Program by selecting it in the Channel menu, as described on page 54.

Adjusting the Convergence Automatically – **FLASH FOCUS™** –

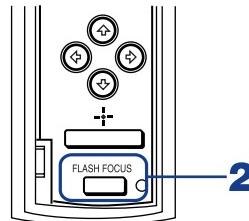
The projection tube image appears on the screen in three colors (red, green and blue). If they do not converge, the color is poor and the picture blurs.

Before you use your projection TV, be sure to adjust the convergence.

The FLASH FOCUS feature allows you to adjust the convergence automatically.

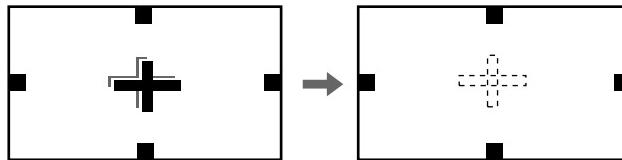
- ☞ It is recommended to perform FLASH FOCUS about 30 minutes after the projection TV is first turned on.

Projection TV front panel



- 1** Receive a TV or cable TV program.
- 2** Press FLASH FOCUS.

The cross pattern shown below appears and FLASH FOCUS begins to work. The adjustment is completed when the cross pattern becomes white and you are returned to the program you were watching.



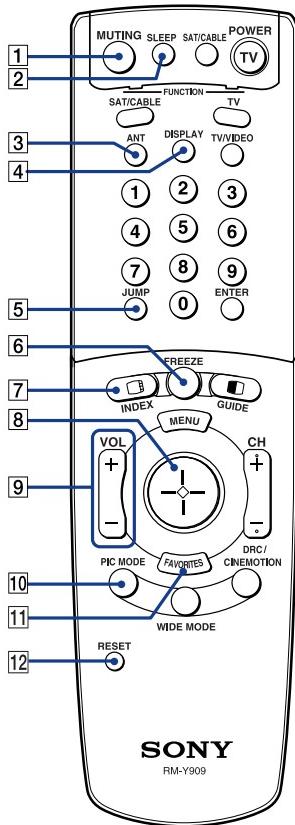
- ☞ You cannot perform any other functions until FLASH FOCUS has completed its cycle.
- ☞ If you perform any other operation while FLASH FOCUS is in progress, FLASH FOCUS operation is canceled.
- ☞ Unshielded speakers or other metallic objects can cause picture distortion if placed close to the projection TV.

Using the Features

Using the Remote Control

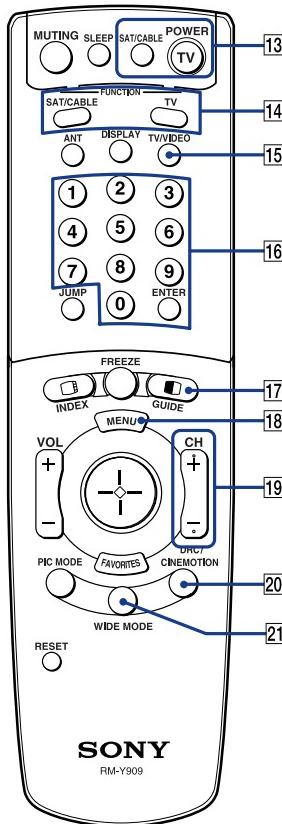
The following table describes the buttons on the remote control that are for more advanced functions.

Button Descriptions



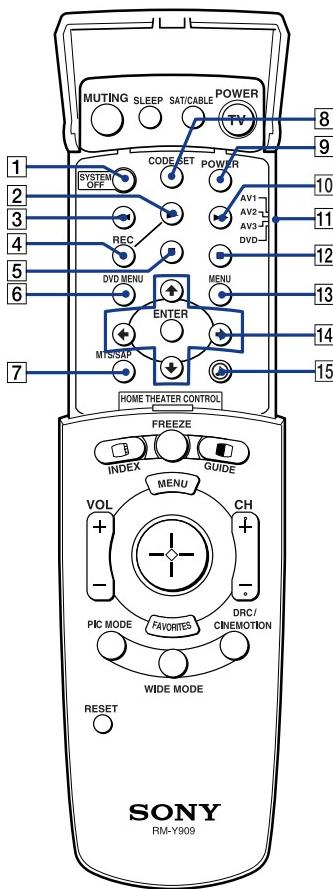
Outside Panel

Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
2 SLEEP	Press repeatedly until the projection TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically. Cancel by pressing until SLEEP OFF appears. While the Sleep feature is set, press once to view the remaining time.
3 ANT	Changes between the VHF/UHF input and the AUX input.
4 DISPLAY	Press once to display the current time and channel label (if set) and channel number. Press again to turn Display off. See page 57 for details on setting the time.
5 JUMP	Press to jump back and forth between two channels. The projection TV alternates between the current channel and the last channel that was selected.
6 FREEZE	Freezes the window picture. Press again to restore the picture.
7 INDEX	Press to enter the Scrolling Channel Index mode. You can view and select from all receivable channels scrolling on the screen without leaving the current one.
8	The joystick allows for movement of the on-screen cursor. Pressing down on the center of the joystick selects the item.
9 VOL +/-	Adjusts the volume.
10 PIC MODE	Press repeatedly to step through the available video picture modes: Vivid, Standard, Movie and Pro. Also available in the Video menu. For details, see "Selecting Video Options" on page 49.
11 FAVORITES	Displays the Favorite Channels list. For details, see "Using Favorite Channels" on page 40.
12 RESET	Press when in a menu to reset the settings to the factory defaults.



Button	Description
13 POWER buttons (GREEN)	Turn on and off the projection TV and other audio/video equipment you have programmed into the remote control. For instructions, see "Programming the Remote Control" on page 68.
14 FUNCTION buttons	Select the equipment (TV, SAT/CABLE) that you want to operate. The indicator lights up momentarily when pushed to show which device the remote control is operating.
15 TV/VIDEO	Cycles through the video equipment connected to your projection TV's video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 and VIDEO 6.
16 0 – 9 and ENTER	Press 0 - 9 to select a channel, the channel changes after 2 seconds. Press ENTER to select immediately.
17 ■	Turns on/off Twin View. For details, see "Using Twin View™" on page 41.
GUIDE	Displays the program guide of your satellite.
18 MENU	Press to display the projection TV on-screen menu. Press again to exit from the menu.
19 CH +/–	Scan through channels.
20 DRC/ CINEMOTION	Press repeatedly to step through the available high-resolution picture modes: Interlaced, Progressive and CineMotion. For details, see "Using the Video Menu" on page 49.
21 WIDE MODE	Press to step through the wide screen modes: Wide Zoom, Normal, Full and Zoom. For details, see "Using Wide Screen Mode" on page 47.

 To scan rapidly through the channels, press and hold down CH+ or CH-.



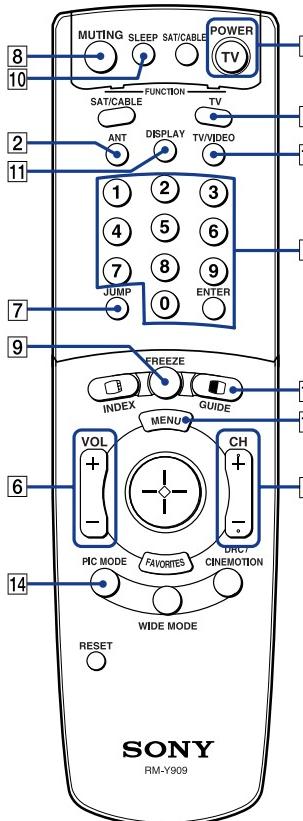
Inside Panel

Button	Description
1 SYSTEM OFF	Press to turn off the projection TV and all equipment connected with S-Link.
2 ►	Play
3 ◀	Rewind
4 REC	Record
5 ■	Stop
6 DVD MENU	Displays the DVD menu.
7 MTS/SAP	Press to scroll through the Multi-channel TV Sound (MTS) options: Stereo, Auto SAP, and Mono.
8 CODE SET	Used for programming the remote control to operate non-Sony video equipment. For details, see "Programming the Remote Control" on page 68.
9 POWER	Press to turn on the DVD/VCR player you have programmed into the remote control. For instructions, see "Programming the Remote Control" on page 68.
10 ►►	Fast-forward
11 AV1, AV2, AV3, DVD	Use to switch control for connected video equipment. You can program one video source for each switch position. For details, see "Programming the Remote Control" on page 68.
12 II	Pause (Press again to resume normal playback)
13 MENU	Displays the Video equipment menu.
14 Up, Down, Left, Right, and ENTER	Use to operate the DVD menu.
15 Audio icon	Press to select an audio option: Steady Sound ON or OFF.

Watching the TV

Many TV features can be accessed directly through the remote control. The following will explain the function of some of the buttons found on your remote control.

Buttons for Projection TV Operations



1 TV (FUNCTION)

Activates the remote control for use with the projection TV.

2 ANT—(AUX input)

Press to change between the VHF/UHF input and the AUX input.

3 TV (POWER)

Turns the projection TV on and off. If a video input indication (e.g., VIDEO 1, VIDEO 2) appears on the screen, press TV/VIDEO or CH +/– until a channel number appears.

4 0-9 and ENTER

Use for direct channel selection. Press 0-9 to select a channel (for example, to select channel 10, press 1 and 0). The channel will change after 2 seconds, or you can press ENTER for immediate selection.

5 CH +/–

Press to scan through the channels (+ up or – down).

6 VOL +/–

Press to adjust the volume (+ up or – down).

7 JUMP

Press to alternate or jump back and forth between two channels. The projection TV will jump between the current channel and the last channel selected.

8 MUTING

Press to mute the sound. “MUTING” will appear on the screen and will dim three seconds later. To restore the sound, press again or press VOL +.

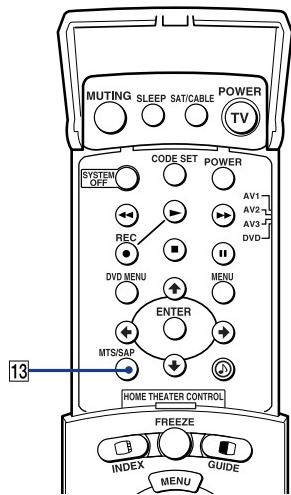
9 FREEZE — (yellow labeled button)

This is useful when you need to copy down information that appears on the TV’s screen (see “Using the Freeze Function” on page 44).

10 SLEEP

Press repeatedly until the projection TV displays the approximate time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically.

Cancel by pressing SLEEP until “SLEEP OFF” appears.



11 DISPLAY

Press to display the channel number, current time and channel label (if set).

To turn the display off, press DISPLAY again.

12 TV/VIDEO

Press repeatedly to scroll through available video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 and VIDEO 6.

If you select Skip as a Video Label in the Setup menu, your projection TV will skip the video input you selected (see "Video Label" on page 59).

13 MTS/SAP

Press to scroll through the Multi-channel TV Sound (MTS) options (see "MTS" on page 51).

14 PIC MODE

Press PIC MODE repeatedly to directly choose one of five different video modes that best suits the program you are watching.

Vivid: Select for enhanced picture contrast and sharpness.

Standard: Select to display a standard picture for normal viewing environments.

Movie: Select to display a finely detailed picture for low light environments.

Pro (Professional): Select to display a picture with minimum enhancements.

When you select each mode, you can also adjust the picture quality (such as Brightness, Color, etc.) to suit your taste. For details, see "Mode" on page 49.

Watching the Digital TV

When you have connected the DTV receiver, you can enjoy digital TV programs. This projection TV is capable of receiving the 1080i, 720p, 480p and 480i digital TV formats.

 This projection TV is not capable of displaying a native 720p format signal. When a 720p format signal is received, it is converted into a 480p format signal.

To view a digital TV program

- 1** Connect the DTV receiver to VIDEO 5 or 6 IN on the projection TV.
(for details, see page 28)
- 2** Press TV/VIDEO to select VIDEO 5 or 6.
- 3** Select a digital channel on the DTV receiver. For details, see the Operating Manual of the DTV receiver.
- 4** Adjust the volume of the projection TV as necessary.

Using Favorite Channels

The Favorite Channel feature lets you select programs from a list of favorite channels that you preset.

To display a list of your favorite channels:

-  Your Favorite Channel options can be set automatically or manually. The factory setting for Favorite Channel is Auto. When Favorite Channel is set to Auto, the last eight channels selected with 0-9 buttons will be set as Favorite Channel options. If you want to input your own selections as Favorite Channel settings, see “Favorite Channel” on page 53.

- 1** Press FAVORITES.

The Favorite Channel options appear.



Preview window

- 2** Move the joystick up or down to highlight the channel you want to watch. The program of that channel appears in the preview window. Press  to select.

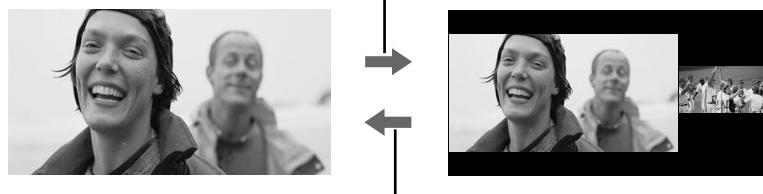
Using Twin View™

Twin View enables you to watch two programs at the same time. You can also change the size of both the left and right pictures.

Activating Twin Pictures

To display twin pictures

- 1** Make sure your projection TV is tuned to a working channel.
- 2** Press .



To cancel twin pictures

- Press  again (or press ).

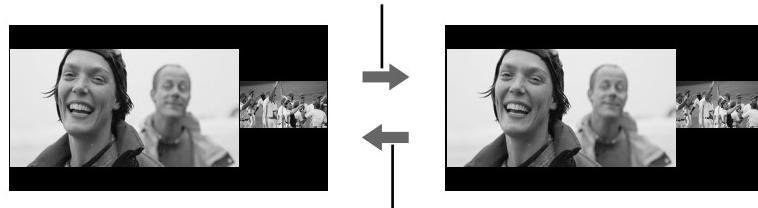
Activating the Picture

Although two pictures appear on the screen at the same time, only one picture is active. Change the picture size by using the joystick. For an active picture, you can:

- Change channels.
- Adjust the volume.
- Switch the input sources from VHF/UHF to cable by pressing ANT or TV/VIDEO to switch the video input.
- Change the picture size by pressing the joystick up or down.

To activate the right picture

- Move the joystick to the right.



To activate the left picture

- Move the joystick to the left.

- ☞ When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View feature the memorized sizes appear.
- ☞ Hookups that affect your ability to use Twin View:
 - If you are viewing all channels through the cable box, the Twin View feature will not work. The cable box only unscrambles one signal at a time, so the right picture will be the same as the left picture.
 - You can watch a scrambled cable channel and another video source. Be sure your DVD player, VCR or satellite receiver are connected to one of the VIDEO IN 1-6 and AUX inputs on the rear of the projection TV. Pictures from equipment connected to VIDEO 5, 6 and AUX will only appear in the left picture, not in the right.
- ☞ The active picture is highlighted in cyan.

Changing the Picture Size

The zoom feature lets you change the size of the left and right pictures.

To enlarge the left picture (reduce the right)

- 1 Move the joystick left to activate the left picture (if not already activated).
- 2 Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.



To enlarge the right picture (reduce the left)

- 1 Move the joystick right to activate the right picture (if not already activated).
- 2 Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.

When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View function, the memorized sizes appear.

Using the Freeze Function

The FREEZE button allows you to temporarily capture a program's picture. You can use this feature to write down information such as phone numbers, recipes, etc.

To use the Freeze function

- 1** When the program information you want to capture is displayed, press FREEZE.
- 2** The projection TV switches to Twin View mode and displays the "frozen" picture on the right, while the current program continues on the left.



- 3** To cancel and return to normal viewing, press FREEZE.

 **Note:** Freeze feature is not available if you are already in Twin View™ mode.

Using Scrolling Channel Index

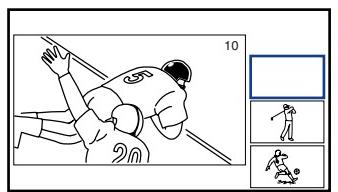
Scrolling Channel Index allows you to view and select from all receivable channels scrolling on the screen without leaving the current channel.

 Scrolling Channel Index will not function when parental Lock is activated.

To use the Scrolling Channel Index function

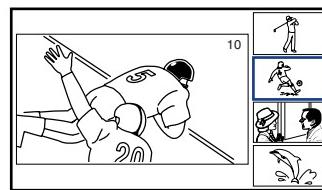
- 1 Press .

The current channel will be reduced in size and displayed on the left in normal motion picture format. The first channel is briefly displayed on the bottom-right side of the screen, then frozen. It scrolls up and the next channel appears on the bottom-right, and the process is repeated with the other channels.

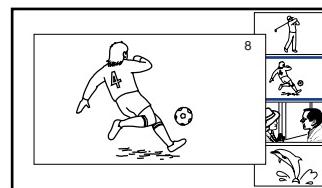


- 2 Move the joystick up and down so that the channel you wish to view is displayed in the cyan frame, and press .

To return to scrolling, move the joystick up and down again.



- 3 To enlarge the selected channel into the left frame, press  again. The selected channel will be displayed in normal motion picture, and the sound also switches to this channel.



(Continued)

Using the Features

4 Press .

The selected channel will be enlarged for normal viewing.



To cancel Scrolling Channel Index

Press  again to resume normal viewing.

Using Wide Screen Mode

Wide Screen Mode lets you watch 4:3 normal broadcasts in several Wide Screen modes (16:9 aspect ratio).

 You can also access the Wide Mode settings in the Wide menu. For details, see page 55.

- Press WIDE MODE repeatedly to toggle through the following Wide Mode settings.



Wide Zoom enlarges the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the 16:9 screen.

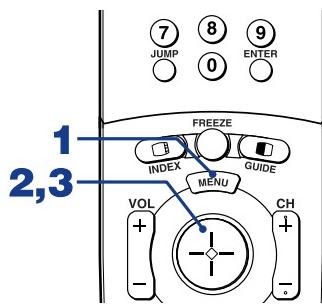
Normal returns the 4:3 picture to its original size.

Full Mode stretches the 4:3 picture horizontally only, to fill the 16:9 screen.

Zoom Mode enlarges the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the 16:9 screen. Useful for watching Letterbox movies.

Using the Menus

Overview



Opening and choosing a menu:

- 1 Press MENU to display the menu screen.
- 2 Move the joystick to the desired menu icon and press to select it.
- 3 Use the joystick to scroll through the features.
- 4 See the specific menu page for instructions on moving through the menu.

The menu gives you access to the following features:

Menu Icon	Description	Page
	Allows you to make adjustments to your picture settings. It also allows you to customize the Picture Mode based on the type of program you are viewing.	49
	Offers enhanced audio options such as listening to second audio programming (SAP), or customizing the Effect of the sound on your projection TV.	51
	Allows you to set up a Favorite Channel list, run the Auto Program function, and more.	53
	Allows you to set the wide screen mode, adjust the vertical center in wide mode, and set the 4:3 Default mode.	55
	Lets you set the clock on your projection TV and allows you to program your projection TV for scheduled viewing using the Timers.	57
	Provides several options for setting up your channels, labeling your Video inputs, and selecting the language of the on-screen menus.	58

To end a menu session:

Press MENU again.

To end one menu session and move to another:

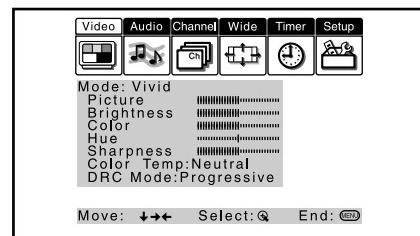
Press the joystick to return to the menu icons.
Move the joystick or to choose the next menu icon and press to select it.



Using the Video Menu

To select the Video Menu

- 1 Press MENU.
- 2 Move the joystick to the Video icon  and press .
- 3 Use the joystick to scroll through the features.
- 4 Press  to select a feature. That feature's adjustment appears.
- 5 Use the joystick to make the desired adjustments.
- 6 Press  to select/set.
- 7 Press MENU to exit the menu screen.



Selecting Video Options

 To quickly and easily change from one Video Mode to another, use the PIC MODE on the remote control.

The Video menu includes the following options.

Option	Description
Mode	Vivid Select for enhanced picture contrast and sharpness.
Customized picture viewing	Standard Recommended for Normal viewing conditions. Movie Select for soft, film like, picture. Pro Select for professional monitor like appearance.
	 You can alter the Video menu settings (Picture, Brightness, Color, etc.) for each Mode.
Picture	Adjust to increase picture contrast and deepen the color or decrease picture contrast and soften the color.
Brightness	Adjust to brighten or darken the picture.
Color	Adjust to increase or decrease color intensity.
Hue	Adjust to increase or decrease the green tones.
Sharpness	Adjust to sharpen or soften the picture.
Color Temp White intensity adjustment	Choose from three color temperatures: Cool Select to give the white colors a blue tint. Neutral Select to give the white colors a neutral tint. Warm Select to give the white colors a red tint (NTSC-Standard).

(Continued)

Using the Menus

Option	Description
DRC Mode	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, Satellite receiver).
<i>Digital Reality Creation</i>	
Interlaced	Recommended for moving pictures.
Progressive	Recommended for still images and text.
CineMotion	Recommended for 24 frame-per-second films.



Using the Audio Menu

To select the Audio Menu

- 1** Press MENU.
- 2** Move the joystick to the Audio icon and press
- 3** Use the joystick to scroll through the options.
- 4** Press to select an option. That option's settings appear.
- 5** Use the joystick to scroll through the settings.
- 6** Press to select the desired setting.
- 7** Press MENU to exit the menu screen.



To restore the factory default settings for Treble, Bass and Balance

- Press RESET on the remote control when in the Audio menu.

Selecting Audio Options

The Audio menu includes the following options:

<i>Option</i>	<i>Description</i>								
Treble	Adjust to increase or decrease higher-pitched sounds.								
Bass	Adjust to increase or decrease lower-pitched sounds.								
Balance	Adjust to emphasize left or right speaker balance.								
Steady Sound	<table border="0"> <tr> <td>ON</td> <td>Select to stabilize the volume.</td> </tr> <tr> <td>OFF</td> <td>Select to turn off Steady Sound.</td> </tr> </table>	ON	Select to stabilize the volume.	OFF	Select to turn off Steady Sound.				
ON	Select to stabilize the volume.								
OFF	Select to turn off Steady Sound.								
Effect	<table border="0"> <tr> <td>Dolby Virtual</td> <td>Select for surround sound (for stereo programs only).</td> </tr> <tr> <td>Simulated</td> <td>Adds a surround-like effect to mono programs.</td> </tr> <tr> <td>OFF</td> <td>Normal stereo or mono reception.</td> </tr> </table>	Dolby Virtual	Select for surround sound (for stereo programs only).	Simulated	Adds a surround-like effect to mono programs.	OFF	Normal stereo or mono reception.		
Dolby Virtual	Select for surround sound (for stereo programs only).								
Simulated	Adds a surround-like effect to mono programs.								
OFF	Normal stereo or mono reception.								
MTS	<table border="0"> <tr> <td>Stereo</td> <td>Select for stereo reception when viewing a program broadcast in stereo.</td> </tr> <tr> <td><i>Enjoy stereo, bilingual and mono programs</i></td> <td> <table border="0"> <tr> <td>Auto-SAP</td> <td>Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)</td> </tr> <tr> <td>Mono</td> <td>Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)</td> </tr> </table> </td></tr> </table>	Stereo	Select for stereo reception when viewing a program broadcast in stereo.	<i>Enjoy stereo, bilingual and mono programs</i>	<table border="0"> <tr> <td>Auto-SAP</td> <td>Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)</td> </tr> <tr> <td>Mono</td> <td>Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)</td> </tr> </table>	Auto-SAP	Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)	Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)
Stereo	Select for stereo reception when viewing a program broadcast in stereo.								
<i>Enjoy stereo, bilingual and mono programs</i>	<table border="0"> <tr> <td>Auto-SAP</td> <td>Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)</td> </tr> <tr> <td>Mono</td> <td>Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)</td> </tr> </table>	Auto-SAP	Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)	Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)				
Auto-SAP	Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)								
Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)								

A virtual surround system attempts to create the same surround effect produced by a multichannel system using only the left and right speakers. Most effective for programs encoded in Dolby Surround.

(Continued)

Using the Menus

Option	Description	
Speaker	ON	Select to turn on the projection TV speakers.
	OFF	Select to turn off the projection TV speakers and listen to the projection TV's sound only through your external audio system speakers.
Audio Out <i>Easy control of volume adjustments</i>	Variable	The projection TV's speakers are turned off, but the volume output from your audio system can still be controlled by the projection TV's remote control.
	Fixed	The projection TV's speakers are turned off and the volume, bass and treble output of the projection TV is fixed. Use your audio receiver's volume control to adjust the volume through your audio system.



Using the Channel Menu

To select the Channel Menu

- 1** Press MENU.
- 2** Move the joystick to the Channel icon  and press .
- 3** Use the joystick to scroll through the features.
- 4** Press  to select a feature. That feature's options appear.
- 5** Use the joystick to scroll through the options.
- 6** Press  to select the desired option.
- 7** Press MENU to exit the menu screen.



Selecting Channel Options

The Channel menu includes the following options:

Option	Description
Favorite Channel	Auto Select if you want Favorite Channel options to be set automatically to the last eight channels selected with the 0-9 buttons. Manual Select if you want to input your own selections as Favorite Channel options.
Cable	ON Select if you are receiving cable channels with a CATV cable. OFF Select if you are using an antenna.  You should run Auto Program after changing the Cable setting.

(Continued)

Option	Description
Channel Fix <i>Useful when you have a cable box or satellite receiver connected</i>	2-6 “Fix” your projection TV’s channel setting to 3 or 4 and use the cable box, VCR or satellite receiver to change channels. Select one of these settings if you have connected the device to the VHF/UHF jack.
AUX 2-6	Same as 2-6, except you select one of these settings if you have connected the device to the AUX jack. (see page 15)
VIDEO 1	Use when connecting an AV receiver to control external video sources. TV output should be connected through the AV receiver.
Auto Program	Automatically programs the projection TV for all receivable channels.
Channel Skip/Add	Removes and adds viewable channels. 1 Use the joystick to scroll through the channels until you find the channel you want to skip/add. 2 Press  to select it. 3 Press the joystick up or down to toggle between “Add” and “Skip.” 4 Press  to select.
Channel Label	Label up to 20 channels with their station call letters.

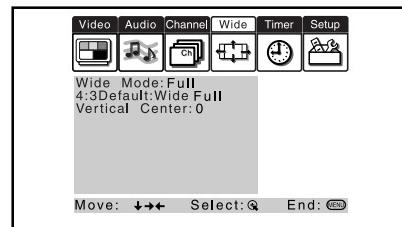
Wide



Using the Wide Menu

To select the Wide menu

- 1 Press MENU.
- 2 Use the joystick to move to the Wide icon  and press .
- 3 Move the joystick to scroll through the features.
- 4 Press  to select a feature. That feature's options appear.
- 5 Use the joystick to scroll through the options.
- 6 Press  to select the desired option.
- 7 Press MENU to exit the menu screen.



Selecting Wide Options

 To change from one Wide Mode to another, use the WIDE MODE button on the remote control.

 Wide Mode is unavailable while in Twin View.

 The 4:3 Default functions only when the projection TV receives 480i signals.

The Wide menu includes the following options:

Option	Description
Wide Mode <i>Select a Wide Mode to use for 4:3 sources.</i>	Wide Zoom Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen. Normal Select to return the 4:3 picture to normal mode. Full Select to enlarge the 4:3 picture horizontally only, to fill the wide screen. Zoom Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
4:3 Default <i>Select the default Screen Mode to use for 4:3 sources.</i>	Wide Zoom Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen. Normal Select to return the 4:3 picture to normal mode. Full Select to enlarge the 4:3 picture horizontally only, to fill the wide screen. Zoom Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen. Off Select to continue using the current Wide Mode setting when the channel or input is changed.

(Continued)

Using the Menus

 If 4:3 Default is set to anything but Off, the Wide Mode setting changes only for the current channel. When you change channels (or inputs), Wide Mode is automatically replaced with the 4:3 Default setting. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off.

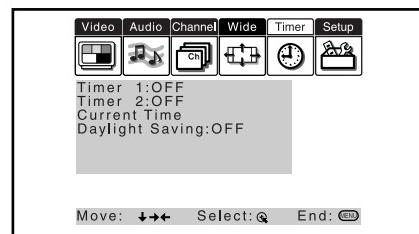
Option	Description
Vertical Center	Allows you to move the position of the picture up and down in the window. (Available only in Wide Zoom and Zoom modes.) Move the joystick up or down to choose a position and press  .



Using the Timer Menu

To select the Timer menu

- 1** Press MENU.
- 2** Move the joystick to the Timer icon and press .



To set the Current Time

- 1** Use the joystick to select “Current Time”, then press .
- 2** If it is currently Daylight Saving Time, be sure to set the mode to “ON” first.
- 3** Use the joystick to enter the correct time, then press .
- 4** Press MENU to exit the menu screen.

To set the Timer

Before setting the timer, be sure to set your projection TV’s clock to the current time and Daylight Saving Mode.

- 1** Move the joystick to “Timer 1” or “Timer 2”, then press .
- 2** Use the joystick to enter your day, time and channel preferences, then press to select each one.
- 3** Press MENU to exit the menu screen.

To reset the Clock or Timers

- Press RESET on the remote control after selecting that option in the Timer menu.

Selecting Timer Options

The Timer menu includes the following options:

Option	Description
Timer 1	Program
Timer 2	Select to set the Timer by day, time, duration, and channel.
	OFF
	Select to turn off the Timer. (Your previous settings will be saved.)
Current Time	Set the current time.
Daylight Saving	ON
	Select in the Spring to adjust the time during Daylight Saving Time.
	OFF
	Select in the Fall to adjust the time at the end of Daylight Saving Time.



Using the Setup Menu

To select the Setup Menu

- 1 Press MENU.
- 2 Move the joystick to the Setup icon and press
- 3 Use the joystick to scroll through the features.
- 4 Press to select a feature. That feature's options appear.
- 5 Use the joystick to scroll through the options.
- 6 Press to select the desired option.
- 7 Press MENU to exit the menu screen.



Selecting Setup Options

The Setup menu includes the following options:

Option	Description
Parental Control	Allows you to set up the TV to block programs according to their content and rating levels. For details about setting, see "Using the Parent Menu" on page 60.
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed captioning).
OFF	Turns off Caption Vision.
CC1, CC2, CC3, CC4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC1 for most programs.)
TEXT1, TEXT2, TEXT3, TEXT4	Displays network/station information presented using either half or the whole screen (if available). For closed captioning, set to CC1.
XDS (<i>Extended Data Service</i>)	Displays a network name, program name, program length, and time of the show if the broadcaster offers this service.

Option	Description
Video Label	Allows you to label the audio/video components you connected to the projection TV so you can identify them when using TV/VIDEO. When in the Setup menu's Video Label feature, use the joystick to highlight an input to label, then press to select it. Use the joystick to scroll through the labels. Press to select the component you connected to each of the input jacks on the back of your projection TV. Select "Skip" if you do not have a component connected to a particular set of input jacks.
VIDEO 1/2/3/4	VHS, 8mm, Beta, LD, Game, SAT, DVD, Web, Receiver, DTV, Skip
VIDEO 5/6	DVD, DTV, HD, Skip
	If you select "Skip", your projection TV skips this connection when you press TV/VIDEO.
Language	Select to display all on-screen menus in your language of choice: English, Español, Français.

To use this feature with widescreen DVDs, set your DVD player to 16:9 aspect ratio.

When you select "Receiver" on Video Label, your projection TV's input is fixed.

Using the Parent Menu

The Parent menu allows you to set up the TV to block programs according to their content and rating levels.

These ratings are assigned by a federal rating board. Not all programs are rated. Using the Parental Lock blocks programs with a specific rating, but it does not block an entire channel.

 Scrolling Channel Index will not function when Parental Lock is activated.

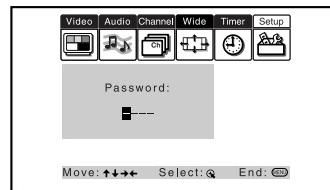
To select the rating

- 1 Press MENU.
- 2 Move the joystick to the Setup icon  and press .



- 3 Make sure that "Parental Control" is selected, and press .

First, set a password, then select the country you reside in (U.S.A. or Canada) and your desired rating.



- 4 Use the 0-9 buttons on the remote control to enter your four-digit password.
- 5 Confirm your password by entering it again. Your password is stored and the Parent menu options appear.

 You need the password entered here for any future access into the Parent menu. If you lose your password, see "Lost password" on page 74.
 If you want to change the password, see page 62.

- 6** Make sure that “Country” is selected, and press .



- 7** Move the joystick up or down to select U.S.A. or Canada according to the country you reside in, and press .

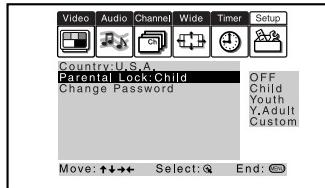


- 8** Move the joystick down to select “Parental Lock”, and press .



- 9** Move the joystick up or down to select a desired rating, and press .

If you select Child, Youth, Young Adult or Custom, the Parental Control is activated automatically.



If you want to select the ratings from Custom, see “Using Custom Rating Options” on page 63.

- 10** Press MENU to exit the menu screen.

 If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more restrictive ratings, select Custom.

 For descriptions of Child, Youth, and Young Adult ratings, see pages 66 and 67.

The Parent menu includes the following options.

<i>Option</i>	<i>Description</i>
Parental Lock	OFF Parental lock is off. No programs are blocked from viewing.
<i>Turn ratings on/off and select a rating system</i>	Child Maximum ratings permitted are: <input type="checkbox"/> US: TV-Y, TV-G, G <input type="checkbox"/> Canada: TV-Y, C, G Youth Maximum ratings permitted are: <input type="checkbox"/> US: TV-PG, PG <input type="checkbox"/> Canada: TV-PG, PG, 8 ans+ Young Adult Maximum ratings permitted are: <input type="checkbox"/> US: TV-14, PG-13 <input type="checkbox"/> Canada: TV-14, 14+, 13 ans+ Custom Select to set ratings manually. <input type="checkbox"/> US: See page 66 for details. <input type="checkbox"/> Canada: See page 67 for details.
Change Password	For changing your password. (see below)

To deactivate the Parental Control feature

- Set Parental Lock to OFF when in the Parent menu.

To change the password

- 1 Select Change Password option when in the Parent menu using the joystick, and press .
- 2 Enter a new four-digit password using the 0-9 buttons.
- 3 Confirm the new password by entering it again.
- 4 Press MENU to exit the menu screen.

Viewing Blocked Programs

You can view a blocked program by entering the password.

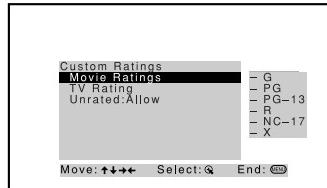
- 1 Press ENTER when tuned to a blocked program.
- 2 Enter your password using the 0-9 buttons.

Parental Control will be canceled temporarily until you turn your projection TV off.

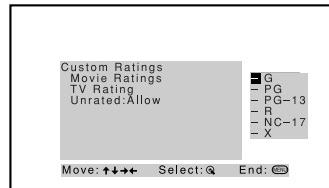
Using Custom Rating Options

If you want to select the ratings to be blocked from Custom, follow the procedure below.

- 1** Perform the steps 1 to 8 in “To select the rating” on page 60 to display the Parental Lock options.
- 2** Move the joystick up or down to select “Custom,” and press .

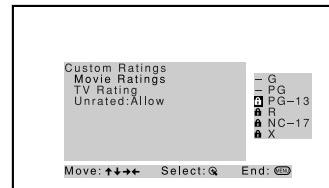


- 3** Make sure that “Movie Ratings” is selected, and press .



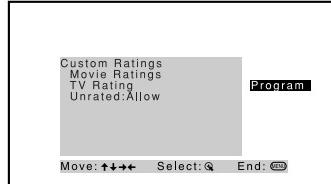
- 4** Move the joystick up or down to select the rating to be blocked, and press .

The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.

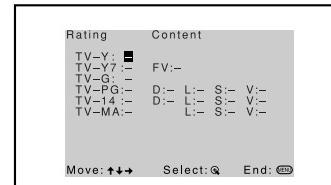


To unblock a rating, select it by moving the joystick up or down, then press . The indicator  changes into “-” and all “lower” ratings are unblocked.

- 5 Move the joystick left, then down, to select “TV Rating” or “Program,” and press .

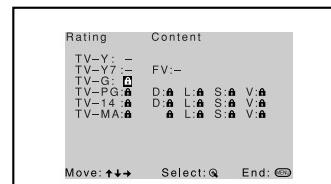


- 6 The “TV Rating” setting menu appears.



- 7 Move the joystick up or down to select the rating to be blocked, and press .

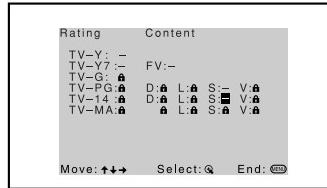
The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



To unblock a rating, select it by moving the joystick up or down, then press  changes into “-” and all “lower” ratings are unblocked.

Some TV ratings have additional content ratings called “extenders.” The extenders are defined as follows: D (sexually suggestive Dialog), FV (Fantasy Violence), L (Coarse Language), S (Sexual situations) and V (Violence). By setting the extenders, you can define additional viewing limits. All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8.

- 8** Move the joystick left or right to select the extender to be viewed, and press .



"-" appears beside the selected extender, indicating that the programs that match the extender can be viewed.

If you press  again,  is displayed to show that the programs that match the extender will be blocked again.

- 9** Repeat step 8 for other extenders.

All programs that match the ratings you select and higher, except for the extenders that were canceled, will be blocked.

- 10** Press MENU to exit the menu screen.

US custom rating options

If you selected U.S.A. as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected Canada, see page 67.)

 To ensure maximum blocking capability, the age-based ratings should be blocked.

 If you choose to block unrated TV programs, please be aware that the following programs may be blocked: emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.

Option	Description	
Movie Rating	G	All children and General Audience.
	PG	Parental Guidance suggested.
	PG-13	Parental Guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 and under allowed.
TV Rating	Age-Based Options	
<i>Block programs by their rating, content or both</i>	TV-Y	All children.
	TV-Y7	Directed to older children.
	TV-G	General Audience.
	TV-PG	Parental Guidance suggested.
	TV-14	Parents Strongly cautioned.
	TV-MA	Mature Audience only.
Content-Based Options		
	FV	Fantasy Violence.
	D	Suggestive Dialogue.
	L	Strong Language.
	S	Sexual situations.
	V	Violence.
Unrated	Block	Blocks all programs and movies that are broadcast without a rating.
<i>Block programs or movies that are broadcast without a rating</i>	Allow	Allows programs and movies that are broadcast without a rating.

 The content ratings will increase depending on the level of the age-based rating. For example, a program with a TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain more intense violence.

Canadian custom rating options

If you selected Canada as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected U.S.A., see page 66.)

Option	Description
English Rating	C All children.
	C8+ Children 8 years and older.
	G General programming.
	PG Parental Guidance.
	14+ Viewers 14 and older.
	18+ Adult programming.
French Rating	G General programming.
	8 ans+ Not recommended for young children.
	13 ans+ Not recommended for ages under 13.
	16 ans+ Not recommended for ages under 16.
	18 ans+ Programming restricted to adults.
USA Rating	See “TV Rating” on page 66 for details.

Other Information

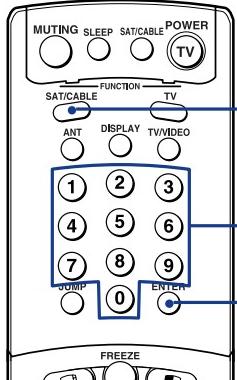
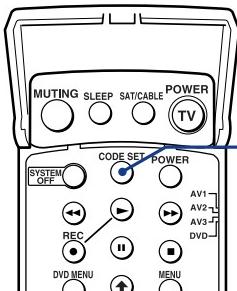
Programming the Remote Control

The remote control is preset to operate Sony brand video equipment.

Sony Equipment	Switch Position on Remote Control	Programmable Code Number
Beta, ED Beta VCRs	AV1	303
8 mm VCR	AV2	302
VHS VCR	AV3	301
DVD Player	DVD	751

If you have video equipment other than Sony brand that you want to control with the projection TV's remote control, use the following procedures to program the remote control.

 The equipment must have infrared (IR) remote capability in order to be used with the remote control.

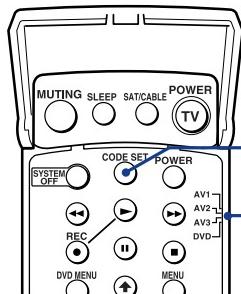


From the "Manufacturer's Codes" listed on page 70, select the three-digit code number for the manufacturer's code for your component. If more than one code number is listed, start with the number listed first. Use the code number to complete the following procedure.

To program a cable box or a satellite receiver

- 1 Open the panel of the remote control.
- 2 Press CODE SET inside the panel.
- 3 Close the panel and press SAT/CABLE (FUNCTION).
- 4 Enter the three-digit manufacturer's code number using the 0-9 buttons.
- 5 Press ENTER.
- 6 To check if the code number works, aim the projection TV's remote control at the component and press the green POWER button that corresponds with that component. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.

To program video equipment



1 Open the panel of the remote control.

2 Move the slide switch to the desired component type.

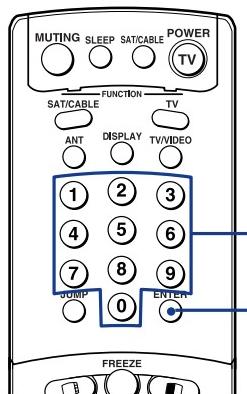
3 Press CODE SET inside the panel.

You must perform step 4 within 10 seconds of step 3, or you must start again from step 3.

4 Close the panel and enter the three-digit manufacturer's code number using the 0-9 buttons.

5 Press ENTER.

6 To check if the code number works, aim the projection TV's remote control at the component, open the panel, and press the green POWER button. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.



Tips

- ❑ If more than one code number is listed, try entering them one by one until you come to the correct code for your component.
- ❑ If you enter a new code number, the code number you previously entered at that setting is erased.
- ❑ In some rare cases, you may not be able to operate your component with the Sony remote control. In this case, use the component's own remote control unit.

Other Information

Manufacturer's Codes

VCRs

Manufacturer **Code**

Sony	301
Admiral	327
(M. Ward)	
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335

Manufacturer **Code**

Minolta	305, 304
Mitsubishi/	323, 324, 325,
MGA	326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/	304, 305, 308,
PROSCAN	309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000	338, 327
(M. Ward)	
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311

Manufacturer **Code**

Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

DVD Players

Manufacturer	Code
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

Cable Boxes

Manufacturer	Code
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Satellite Receivers

Manufacturer	Code
Sony	801
General	802
Electric	
Hitachi	805
Hughes	804
Panasonic	803
RCA/	802, 808
PROSCAN	
Toshiba	806, 807

Operating Other Components with Your Projection TV Remote Control

Operating a VCR

Open the panel and move the slide switch to the AV input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Change channels	CH +/-
Record	► and REC simultaneously
Play	►
Stop	■
Fast forward	►►
Rewind the tape	◀◀
Pause	(press again to resume normal playback)
Search the picture forward or backward	►► or ◀◀ during playback (release to resume normal playback)
Change input mode	Slide switch

Operating a DVD Player

Open the panel and move the slide switch to the DVD input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Play	►
Stop	■
Pause	(press again to resume normal playback)
Step through different tracks of an audio disc	►► to step forward or ◀◀ to step backward
Step through different chapters of a video disc	CH+ to step forward or CH- to step backward
Display the DVD menu	DVD MENU
Select tracks directly	0-9 buttons
Display the menu (Setup)	MENU
Operate the DVD menu	↑, ↓, ←, →, ENTER

(Continued)

Operating a Cable Box

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Cable Box	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP

Operating a Satellite Receiver

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Satellite Receiver	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP
Display channel number	DISPLAY
Display DBS guide	GUIDE
Display DBS menu	MENU
Move highlight (cursor)	Joystick or arrows
Select item	

Troubleshooting

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Customer Information Services Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

Problem	Possible Remedies
No picture (screen not lit), no sound	<input type="checkbox"/> Make sure the projection TV's power cord is connected securely to the wall outlet. <input type="checkbox"/> Push the power button on the front of the projection TV. <input type="checkbox"/> Check to see if the TV/VIDEO setting is correct: when watching TV, set to TV, and when watching connected equipment, set to VIDEO 1, 2, 3, 4, 5 or 6. <input type="checkbox"/> Try another channel. It could be station trouble. <input type="checkbox"/> The Parental Control feature is activated (see "Using the Parent Menu" on page 60). <input type="checkbox"/> If your projection TV does not turn on, and a red light keeps flashing, your projection TV may need service. Call your local Sony Service Center.
Remote control does not operate	<input type="checkbox"/> Batteries could be weak. Replace the batteries. <input type="checkbox"/> Press TV (FUNCTION) when operating your projection TV. <input type="checkbox"/> Make sure the projection TV's power cord is connected securely to the wall outlet. <input type="checkbox"/> Locate the projection TV at least 3-4 feet away from fluorescent lights. <input type="checkbox"/> Check the orientation of the batteries.
Dark, poor or no picture (screen lit), good sound	<input type="checkbox"/> Adjust the Picture setting in the Video menu (see page 49). <input type="checkbox"/> Adjust the Brightness setting in the Video menu (see page 49). <input type="checkbox"/> Check antenna/cable connections. <input type="checkbox"/> Adjust the convergence again using FLASH FOCUS (see "Adjusting the Convergence Automatically – FLASH FOCUS™ –" on page 33).
Good picture, no sound	<input type="checkbox"/> Press MUTING so that "MUTING" disappears from the screen (see page 34). <input type="checkbox"/> Make sure Speaker is set to ON in the Audio menu (see page 52). <input type="checkbox"/> Check the MTS setting in the Audio menu (see "MTS" on page 51).
Cannot receive digital channels (when a DTV receiver is connected)	<input type="checkbox"/> Check the connections between the DTV receiver and the projection TV (see page 28). <input type="checkbox"/> Check your local listings to find out if you can receive digital broadcasts in your area.
Cannot receive upper channels (UHF) when using an antenna	<input type="checkbox"/> Change Cable to OFF (see page 53). <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54).
No color	<input type="checkbox"/> Adjust the Color settings in the Video menu (see page 49).
Only snow and noise appear on the screen	<input type="checkbox"/> Check the Cable setting in the Channel menu (see "Cable" on page 53). <input type="checkbox"/> Check the antenna/cable connections. <input type="checkbox"/> Make sure the channel is broadcasting programs. <input type="checkbox"/> Press ANT to change the input mode (see page 37).
Dotted lines or stripes	<input type="checkbox"/> Adjust the antenna. <input type="checkbox"/> Move the projection TV away from noise sources such as cars, neon signs, or hair-dryers.

(Continued)

Other Information

Problem	Possible Remedies
Projection TV is fixed to one channel	<input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). <input type="checkbox"/> Check your Channel Fix settings (see page 54).
Double images or ghosts	<input type="checkbox"/> Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).
Cannot operate menu	<input type="checkbox"/> If the item you want to choose appears in gray, you cannot select it. <input type="checkbox"/> Turn the projection TV's power off and on again.
Cannot receive any channels when using cable TV	<input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). <input type="checkbox"/> Check your cable settings. <input type="checkbox"/> Make sure Cable is set to ON in the Channel menu (see page 53).
Cannot gain enough volume when using a cable box	<input type="checkbox"/> Increase the volume of the cable box using the cable box's remote control. Then press TV (FUNCTION) and adjust the projection TV's volume.
Channel Index does not display all available channels	<input type="checkbox"/> Make sure Cable is set to ON in the Channel menu (see "Cable" on page 53). <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Cannot receive channels Unable to select a channel	<input type="checkbox"/> Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Lost password	<input type="checkbox"/> In the password screen (see page 60), enter the following master password: 4357. The master password clears your previous password; it cannot be used to temporarily unblock channels.
Cannot change channels with the remote control	<input type="checkbox"/> Be sure you have not inadvertently switched your projection TV from channel 3 or 4 setting if you are using another device to change channels. <input type="checkbox"/> If you are using another device to control channels, be sure the "function" button for that device has been pressed, or the slide switch is set correctly. For example, if you are using your cable to control channels, be sure to press SAT/CABLE.
Cannot cycle through the other video equipment connected to the projection TV	<input type="checkbox"/> Be sure the Video Label feature has not been set to Skip (see page 59).
There is a black box on the screen	<input type="checkbox"/> You have selected a text option in the Setup menu and no text is available. (see page 58 to reset Setup selections) To turn this feature off, select OFF in the Caption Vision option. If you were trying to get closed captioning, select CC1 instead of Text 1-4.
There is no twin picture or it is just static	<input type="checkbox"/> Be sure your twin picture is set to a video source/channel that has a program airing. <input type="checkbox"/> You may be tuned to a video input with nothing connected to it. Try cycling through your video inputs using TV/VIDEO. <input type="checkbox"/> Twin View is not set to receive a signal from the AUX input. If you have connected a VCR, DVD player or satellite receiver to the AUX input on the projection TV, it will not show in the second picture.

Problem	Possible Remedies
You get the same program in the window picture as in the main picture	<ul style="list-style-type: none"><li><input type="checkbox"/> Both may be set to the same channel. Try changing channels in either the main picture or the window picture.<li><input type="checkbox"/> You may be running all your channels through a cable box. The cable box will only unscramble one signal at a time, so you cannot use the Twin View feature. If possible, run a direct cable to your projection TV's VHF/UHF input (this will only work if your cable system provides an unscrambled signal.)
You cannot get anything but TV channels in your second picture	<ul style="list-style-type: none"><li><input type="checkbox"/> Be sure the video label has not been set to skip your video inputs. See the Setup menu on page 59.
Favorite Channel does not display your choices	<ul style="list-style-type: none"><li><input type="checkbox"/> Verify that Favorite Channel is set to Manual in the Channel menu (see "Favorite Channel" on page 53).
Some video sources do not appear when you press TV/VIDEO	<ul style="list-style-type: none"><li><input type="checkbox"/> Ensure that Video Label is not set to SKIP (see "Video Label" on page 59).

Other Information

Specifications

Projection System	3 picture tubes, 3 lenses, horizontal in-line system	
Picture Tube	7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system	
Projection Lenses	High performance, large diameter hybrid lens F1.1	
Antenna	75 ohm external terminal for VHF/UHF	
Television System	NTSC, American TV Standard	
Screen Size (measured diagonally)	51 inches (KP-51HW40) 57 inches (KP-57HW40)	
Channel Coverage		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Power Requirements	120V, 60 Hz	
Number of Inputs/Outputs		
Video (IN)	4	1 Vp-p, 75 ohms unbalanced, sync negative
S Video (IN)	3	Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms
Audio (IN)	6	500 mVrms (100% modulation) Impedance: 47 kilohoms
AUDIO (VAR/FIX)	1	500 mVrms at the maximum volume setting (Variable) 500 mVrms (Fixed) Impedance (output): 2 kilohoms
TV Out	1	Video: 1 Vp-p 75 ohms unbalanced, Sync negative Audio: 500 mVrms (100% modulation) Impedance (output): 1 kilohoms
CONTROL S (IN/OUT)	1	minijacks
Component Video Input	2 (Y, P _B , P _R)	Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative P _B : 0.7 Vp-p, 75 ohms P _R : 0.7 Vp-p, 75 ohms
RF Inputs	2	
Converter	1	
Speaker Output	20 W × 2	
Dimensions (W × H × D)	47 1/8 × 51 5/8 × 24 7/8 inches (1,194 × 1,310 × 630 mm) (KP-51HW40) 52 1/4 × 54 1/4 × 27 1/4 inches (1,326 × 1,377 × 690 mm) (KP-57HW40)	
Mass	167 lb 9oz (76 kg) (KP-51HW40) 196 lb 3oz (89 kg) (KP-57HW40)	
Power Consumption		
In Use	230 W	
In Standby	Under 1 W	

Supplied Accessories

Remote Control	RM-Y909
AA (R6) Batteries	2 supplied for remote control

Optional Accessories

AV Cable	VMC-810/820/830 HG
Audio Cable	RKC-515HG
Control S Cable	RK-G69HG
Component Video Cable	VMC-10/30 HG
AV Receiver	STR-V555ES or equivalent

Design and specifications are subject to change without notice.

Index

A

- Activating a Twin View screen **41**
- Adding channels to the channel list **54**
- Adjusting audio, Steady Sound **51**
- ANT button **34**
- Antenna, connecting **16**
- Audio menu **48, 51**
- Audio receiver, connecting **25**
- Audio/Video cable **12**
- Auto Program (channel setup) **32, 54**
- AV receiver, connecting to TV OUT **15, 30**

B

- Balance, adjusting **51**
- Bass, adjusting **51**
- Batteries, inserting in remote **10**
- Bilingual audio **51**
- Brightness, adjusting **49**

C

- Cable
 - connecting
 - setting ON/OFF **54**
 - with VCR, connecting **19**
- Cable box
 - connecting with VCR **20**
 - using with TV remote control **72**
- Camcorder, connecting **29**
- Caption Vision **58**
- CATV. See cable.
- Channel list, adding channels **54**
- Channel menu **48, 53**
- Channel Skip/Add **54**
- Channels
 - Auto Program **54**
 - creating labels **54**
 - setting up **32**
- CineMotion, DRC **35, 50**
- Closed caption modes **58**
- CODE SET button **36**
- Color temperature, adjusting **49**
- Color, adjusting **49**

Connecting

- Audio receiver **25**
- AV receiver **30**
- Cable box **17, 18, 20–??**
- Cable or antenna **16**
- Camcorder **29**
- Digital TV Receiver **28**
- DVD player **26, 27**
- Satellite receiver **23, 24**
- VCR **20–22, 24**

Connector Types

12

Contents of box

10

CONTROL S

31

Convergence, adjusting automatically

33

D

- Daylight saving **57**
- Digital Reality Creation **50**
- Digital TV
 - connecting **28**
 - watching **39**
- Digital TV program **39**
- Digital TV receiver, connecting **28**
- DISPLAY button **34**
- Display, turning off **34**
- DRC (Digital Reality Creation) Mode, described **8**
- DRC/CINEMOTION button **35**
- DVD MENU button **36**
- DVD player
 - using with TV remote control **71**
 - with A/V connectors, connecting **27**
 - with component video connectors, connecting **26**
- DVD TITLE button **36**

E

Effect

- TruSurround **50**
- Simulated **50**
- Off **50**

Enlarging pictures, in Twin View

43

Extended Data Service

58

F

Favorite Channel

- auto **53**
- described **8**

manual **53**
setting up **53**
using **40**

FAVORITES button **34**

Features **8**

Flash Focus

described **9**
performing **33**

FREEZE button **34**

Freeze, using **37, 44**

Front Panel Controls **13**

FUNCTION buttons (WHITE) **35**

H

Hookups **16–31**

Hue, adjusting **49**

I

Inputs, labeling **59**

Installation of the projection TV **16–31**

J

JUMP button **34**

Jump, using **37**

L

Label

channels **54**
video inputs **59**

M

MENU button **35**

Menus

Audio **48, 51**
Channel **48, 53**
Setup **48, 58**
Timer **48, 57**
Video **48, 49**
Wide **45, 48**

menus

Timer **55**

MODE

Movie **38, 49**
Pro **38, 49**
Standard **38, 49**
Vivid **38, 49**

MTS/SAP button **38**

MTS/SAP, using **51**

Muting, using **37**

P

Parental control, described **8**

Password, changing **62**

PIC MODE button **34**

Picture contrast, adjusting **49**

Picture size, adjusting in Twin View **43**

POWER button **36**

POWER buttons (GREEN) **35**

Presetting channels **32, 54**

Problems, troubleshooting **73**

R

Ratings

setting **60–65**

viewing blocked programs **62**

Rear panel controls and connections **14, 15**

Remote control

buttons inside panel **36**

Function of buttons **37, 38**

inserting batteries **10**

programming **68–70**

Remote control, operating other components with

Cable box **72**

DVD player **71**

Satellite receiver **72**

VCR **71**

Removing channels from the channel list **54**

RESET button **34**

Resetting

Audio options **51**

Timer options **57**

Video options **49**

S

S Video cable **12**

SAT/CABLE function button **35**

SAT/CABLE power button **35**

Satellite receiver

connecting **23**

using with TV remote control **72**

Setting up channels **32, 54**

Setup menu **48, 58**

Sharpness, adjusting **49**

SLEEP button **34**

Sleep, using **37**

Specifications **76–77**

Steady Sound

adjusting **51**

described **8**

(Continued)

Surround sound **51**
SYSTEM OFF button **36**

T

Tape-to-tape editing **22**

Time

 set current **57**

 set daylight saving **57**

Timer menu **48, 55, 57**

Timer setting **57**

Treble, adjusting **51**

Troubleshooting **73–75**

TV function button **34, 35**

TV power button **35**

TV/VIDEO button **35**

Twin View™

 activating a picture **41**

 described **8**

 using **41**

V

VCR

 connecting two, for tape editing **22**

 using with TV remote control **71**

 with cable box, connecting **20**

 with cable, connecting **19**

 with satellite receiver, connecting **24**

Video inputs, labeling **59**

Video menu **48, 49**

Video Modes, selecting **49**

Viewing area, recommended **11**

VOL +/- button **34, 37**

Z

Zoom feature, with Twin View **43**

<http://www.world.sony.com/>

Printed in U.S.A.

If, after reading this instruction manual, you have additional questions related to the use of your Sony projection TV, please call one of the following numbers (English only).

Customers in the continental United States contact the Direct Response

Center at:

1-800-222-SONY (7669)

Customers in Canada contact the

Customer Relations Center at:

(416) 499-SONY (7669)

SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

CORRECTION - 1

**SUBJECT: EXPLODED VIEW AND ELECTRICAL PARTS LIST
A BOARD P/N CORRECTION**

Correct the service manual as shown.
File this Correction with the service manual.

: Corrected Item

Section 7: Exploded View (Page 96)

7-2. Chassis

INCORRECT			CORRECT		
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
54	*A-1272-481-A	A BOARD, COMPLETE(VAR)		DELETE	

Section 8: Electrical Parts List (Page 112)

INCORRECT			CORRECT		
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
	*A-1272-481-A	A BOARD, COMPLETE		*A-1299-596-A	A BOARD, COMPLETE

COLOR REAR VIDEO PROJECTOR
SONY®

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

SUPPLEMENT - 1

**SUBJECT: NEW CRT'S INTRODUCED
AFFECTS S/N'S 90000001 - 90XXXXXX ONLY**

Correct the service manual as shown.

File this Supplement with the service manual.

 : Modified Items:

Section 3: Set Up Adjustments (Page 12, 13)

Section 6: Diagrams

 6-3. Schematic Diagrams (Page 62)

Section 7: Exploded Views

 7-2. Chassis (Page 96)

 7-3. Picture Tube (Page 97)

Section 8: Electrical Parts List

 CR Board (Page 98)

 CG, CB Boards (Pages 99-100)

 D Board (Page 123,128)

COLOR REAR VIDEO PROJECTOR
SONY[®]

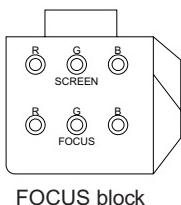
Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

SECTION 3

SET-UP ADJUSTMENTS

3-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the FOCUS block all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.



FOCUS block

Fig. 3-1

3-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

Fine Mode is recommended to set screen controls to their optimal condition. It is necessary to build the simple jig, illustrated below, using 3-watt resistors. Please note, that if the proper voltage is not obtained with their listed values, resistors, then please increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO1 mode without signals.
2. Connect G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board and CB board.
5. Adjust R, G and B screen voltage to $177.5 \pm 0.5V$ with screen VR on the Focus block.

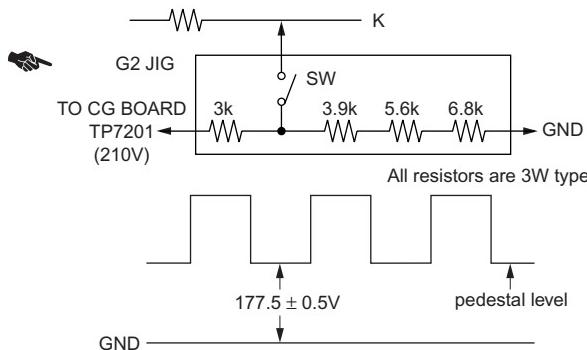


Fig. 3-2

3-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Loosen the deflection yoke set screw and align the tilt of the Deflection Yoke so that the bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. The tilt of the deflection yoke for red is aligned in the mode Cover the both green and blue picture lenses with the lens caps and the tilt of the deflection yoke for blue is aligned with in

the mode Cover the both green and red picture lenses with the lens caps is aligned the same as was done for green.

Note: Instead of items 2 and 5, you can cut off the unnecessary color beams by controlling the service mode CXA2150P-2 0 RGBS.

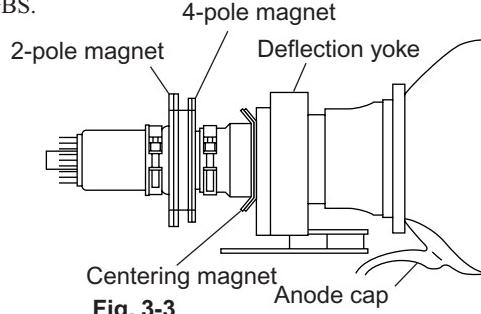


Fig. 3-3

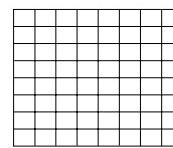
3-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander in the service mode.

For details of the usage of the service mode and the remote commander, please refer the item 3-9. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the both green and blue picture lenses with the lens caps to show only the red color.
6. Adjust red CRT lens just the same as green.
7. Cover the both green and red picture lenses with the lens caps to show only the blue color.
8. Adjust blue CRT lens just the same as green.
9. After adjusting the items 3-5. Focus VR Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

*: Every time you press 6, the test signal changes to "crosshatch+video signal" - "crossbatch+borderline(black)" - "crosshach(black)" - "dots(black)" - off.



Test signal

Fig. 3-4

Note: Instead of items 2, 5 and 7, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-5. FOCUS VR ADJUSTMENT

- Set generator to crosshatch.
- Cover the both red and blue picture lenses with the lens caps to show only the green color.
- Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
- Cover the both green and blue picture lenses with the lens caps to show only the red color.
- Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
- Cover the both green and red picture lenses with the lens caps to show only the blue color.
- Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
- After adjusting the items 3-4. Focus Lens Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

Note: Instead of items 2, 4 and 6, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1

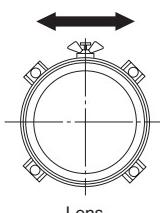


Fig. 3-5

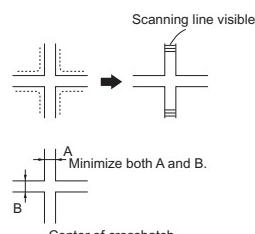
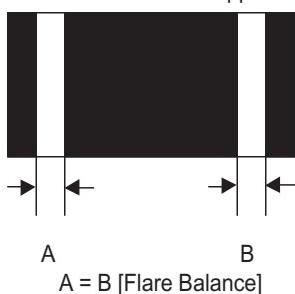


Fig. 3-6

3-6 2-POLE MAGNET AND CENTERING MAGNET ADJUSTMENT

- Either select the PJED Test Pattern dot signal or apply an external dot signal
- Set the Picture control to Max., Brightness to 50% and the VM to OFF, in the customer users menu.
- Cut off the red and blue CRTs by controlling the service mode 2150P-2 1 RGBS.
- Turn the green focus control counterclockwise so the picture is slightly defocus (just off of focus). Confirm that the dot size increases slightly.
- Adjust the the 2-pole magnet so that the left and right side flare levels (compare the dots that are indicated in the white areas of the figure below) are balanced and are approximately equal.



- Readjust the Green focus control to best focus position. (minimum dot diameter)
- Apply a Monoscope signal to the set.
- Adjust the H-CENTERING and V-CENTERING roughly By the centering magnets.

- Check 2-Pole magnet adjustment. If necessary, repeat steps 1 – 6.
- Adjust the Red 2-pole magnet and centering magnet in the same manner.
- Adjust the Blue 2-pole magnet and centering magnet in the same manner

3-7. CENTERING MAGNET ADJUSTMENT

Not required - Combined with 2-Pole Magnet adjustment

3-8. 4-POLE MAGNET ADJUSTMENT

- Set the picture mode to "Pro" and picture to MAX.
- Receive the Dot signal.
- Cover the both red and blue picture lenses with the lens caps to show only the green color.
- Turn the green focus VR on the focus block to the right and set the spot will become smaller.
- Adjust the 4-Pole Magnet so that the spot becomes round for green and red.
- Adjust blue spot to an oval shape X:Y = 1:1.2

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150p-2 1 RGBS.

Use the center dot

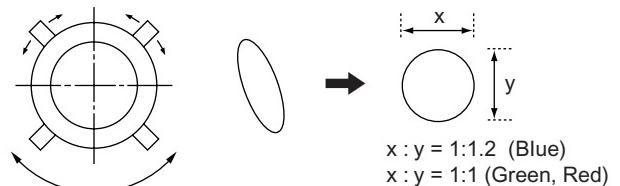
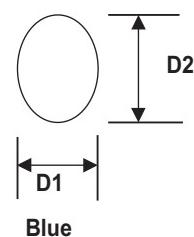


Fig. 3-8

3-9 BLUE DEFOCUS ADJUSTMENT

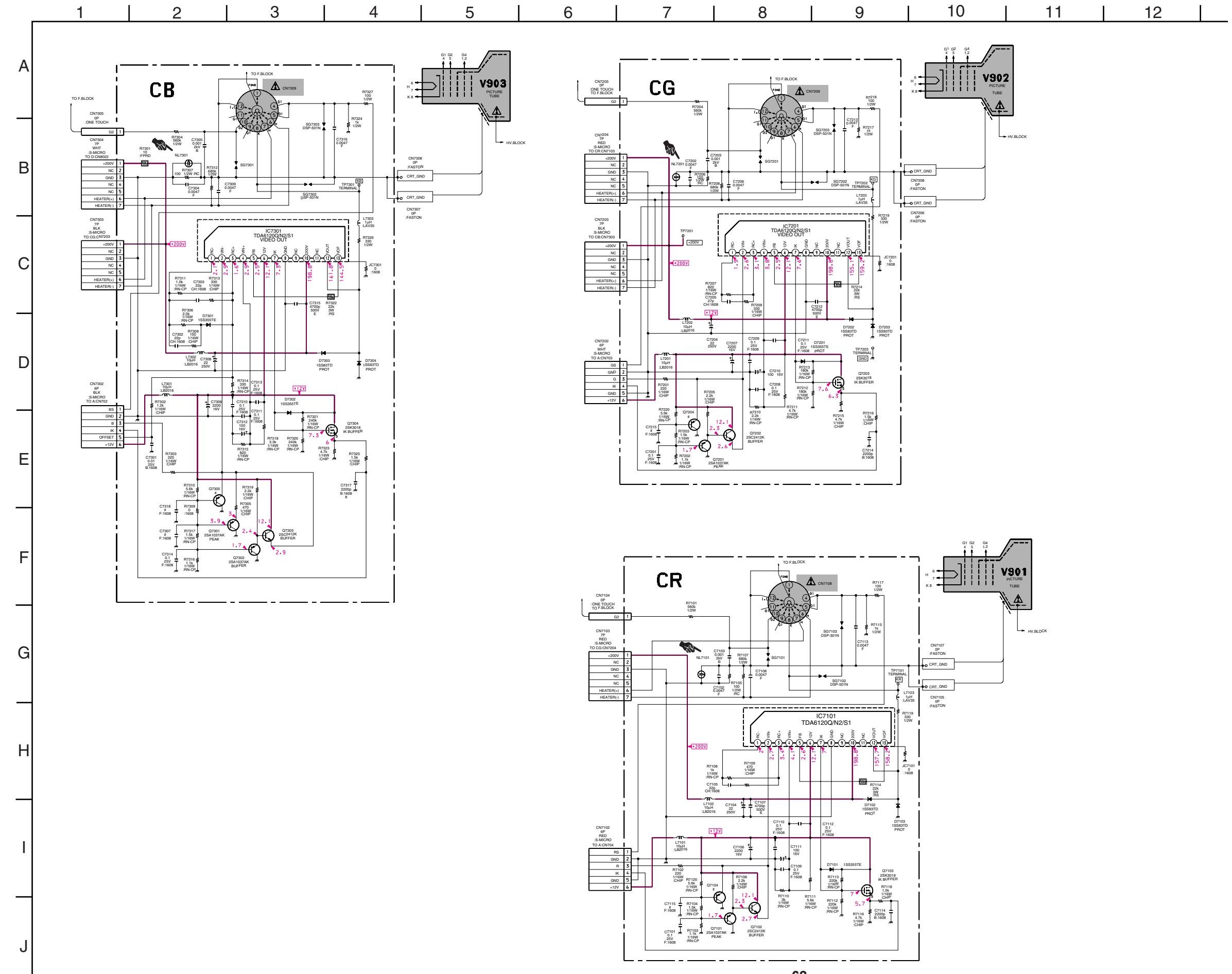
- Setup: Apply a Dot Hatch Signal and set the mode to Vivid Mode and verify the color temperature is set to Cool in the users menu. Cut off the red and green CRT's by controlling the service mode 2150P-2 1 RGBS.
- Turn the Blue focus control clockwise, until the dot at the center becomes oval. (see figure below).



$$D1:D2 = 1:1.2$$

- Confirm the flare is minimal while the bright spot is located in the center. If not, please readjust the 2 and 4 pole magnets.
- Check for uniformity on a 100% IRE all white field.

CR/CG/CB BOARD SCHEMATIC



SECTION 7: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

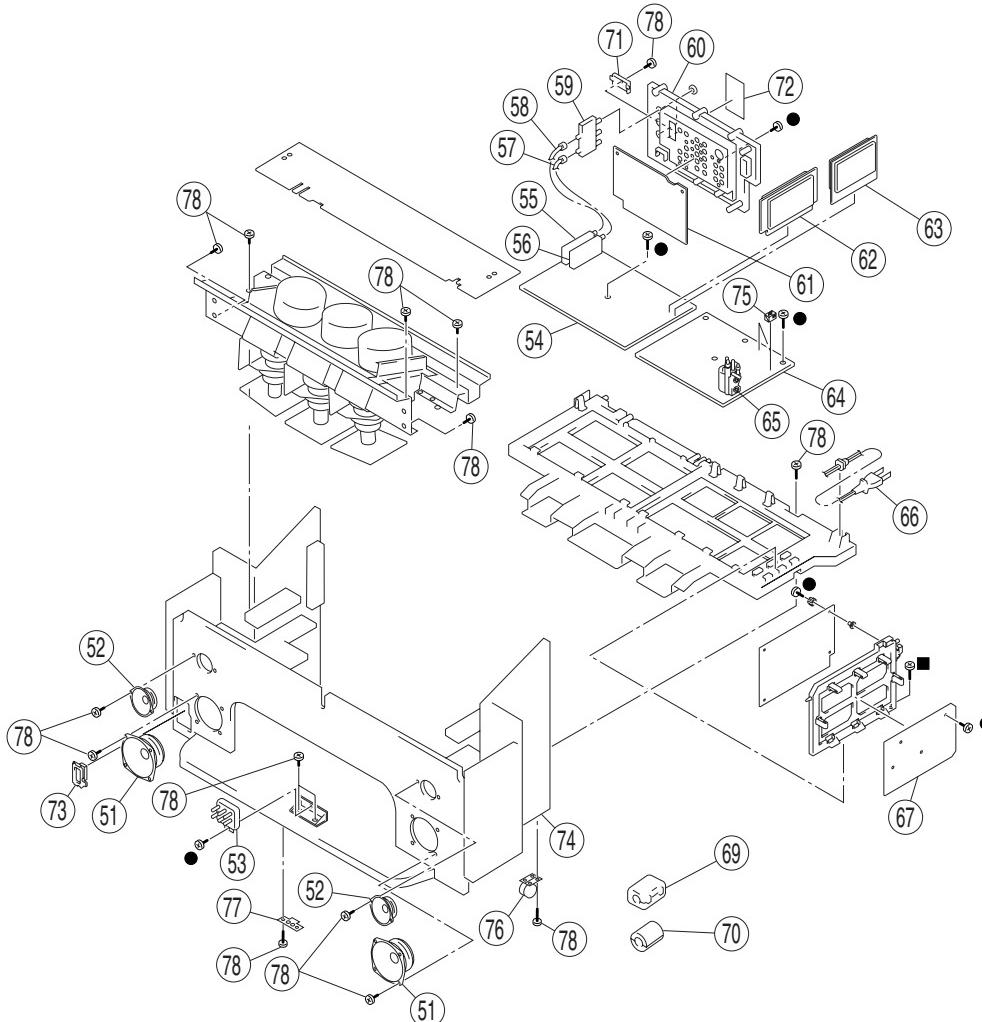
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-2. CHASSIS

- 7-685-648-79 +BVTP 3X12
- 7-685-661-14 +BVTP 4X12



REF. NO.	PART NO.	DESCRIPTION	[Assembly includes]
51	1-544-894-11	SPEAKER (13cm)	
52	1-529-403-31	SPEAKER (6.6cm)	
 53	1-223-925-11	RESISTOR ASSY(HIGH-VOLTAGE)(FOCUS PACK)	
54 *	A-1272-481-A	A BOARD, COMPLETE (VAR)	
54 *	A-1299-596-A	A BOARD, COMPLETE	
55	8-598-542-20	TUNER, FSS BTF-WA412 (TU2)	
56	8-598-430-50	TUNER, FSS BTF-FA401 (TU1)	
57 *	1-557-056-31	CABLE, P-P	
58 *	1-551-488-91	CABLE, P-P	
59	1-771-787-11	SWITCH, RF ANTENNA	
60	4-081-961-01	BOARD, TERMINAL	
61 *	A-1373-870-A	U BOARD, COMPLETE (VAR)	
62 *	A-1136-218-A	B BOARD, COMPLETE	
63 *	A-1299-523-A	AD BOARD, COMPLETE	
64 *	A-1300-417-A	D BOARD, COMPLETE	
65	1-453-285-21	FBT ASSY, NX-4006//X4P4 (T8005)	
 66	1-790-130-11	CORD, AC POWER(WITHCONNECTOR)	
67 *	A-1316-566-A	G BOARD, COMPLETE	
69	1-500-021-11	CLAMP, SLEEVE FERRITE	
70	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE)	
71	4-069-675-01	CAP, TERMINAL BOARD	
72	4-081-576-11	LABEL, TERMINAL	
73 *	4-084-570-01	COVER, CABINET (HW)	
74	X-4039-324-1	CABINET (57) ASSY, BOTTOM (57HW40) [73, 76, 77]	
74 *	X-4039-330-1	CABINET (51) ASSY, BOTTOM (51HW40) [73, 76, 77]	
75	3-710-578-01	COVER, VOLUME, 6 MOLD	
76	4-040-755-01	CASTER (DIA. 30)	
77	4-075-020-01	FOOT, PLASTIC	
78	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20	



SECTION 7: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

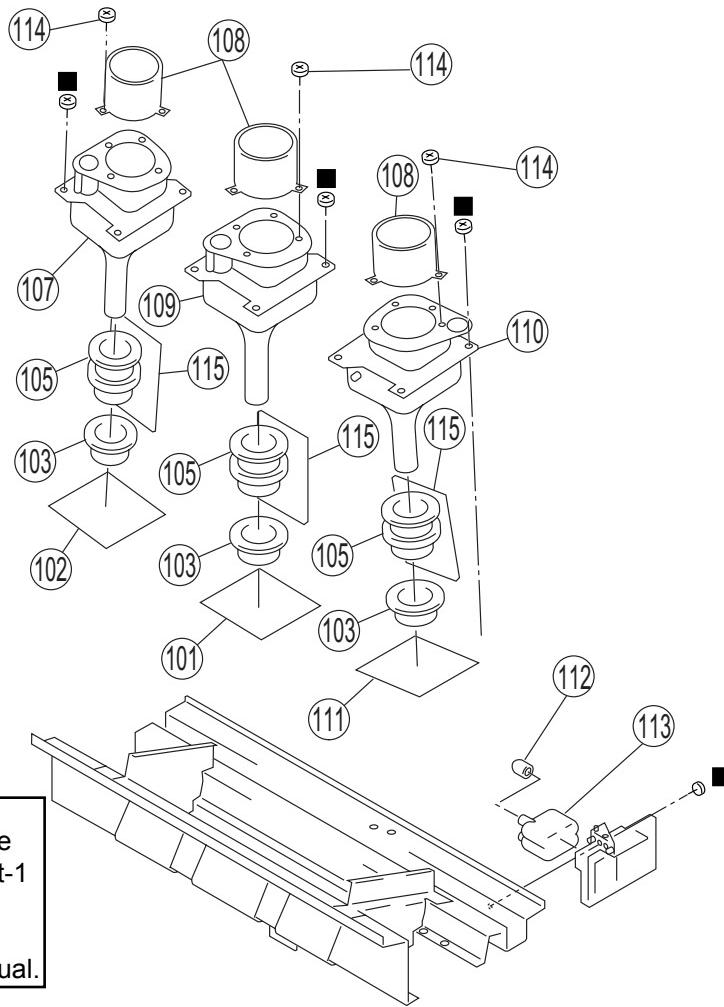
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-3. PICTURE TUBE

■ 7-685-650-79 SCREW +BVTP 3X16



NOTE:

For S/N's 90000001-90XXXXXX, use CRT P/N's referred to in Supplement-1 (listed below)

For S/N's 97000001-98XXXXXX, use CRT P/N's listed in original manual.

REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
101*	A-1332-241-A	CG BOARD, COMPLETE		114	4-052-894-01	SCREW (4X20), HEAD TAPPING	
102*	A-1332-240-A	CR BOARD, COMPLETE		115*	A-1342-598-A	V BOARD, COMPLETE	
 103	1-452-790-31	2P/4P MAGNET ASSY.					
 105	1-451-537-21	DEFLECTION YOKE					
  107	8-733-648-05	CRT 07MVC41 (R) - L (VM) (57HW40)					
  107	8-733-650-05	CRT 07MVC31 (R) - L (VM) (51HW40)					
108	4-083-750-01	LENS (DELTA 260) (57HW40)					
108	4-083-751-01	LENS (DELTA 250) (51HW40)					
  109	8-733-652-05	CRT 07MVC21 (G) - L (VM)					
  110	8-733-647-05	CRT 07MVC41 (B) - L (VM) (57HW40)					
  110	8-733-649-05	CRT 07MVC31 (B) - L (VM) (51HW40)					
111*	A-1332-242-A	CB BOARD, COMPLETE					
112	4-373-137-01	CAP (Z), RUBBER					
 113	8-598-955-31	BLOCK ASSY, HV HVB- 1031					

SECTION 8: ELECTRICAL PARTS LIST

CR

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol:  indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

RESISTORS

- All resistors are in ohms
- F : nonflammable
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When ordering parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES
CR								
		* A-1332-240-A CR BOARD, COMPLETE						
		4-382-854-11 SCREW (M3X10), P, SW (+)						
		* 7-651-000-50 GREASE,SILICON (G-746) 200G						
		CAPACITOR						
C7101	1-164-156-11	CERAMIC CHIP	0.1UF	25V				
C7102	1-101-003-00	CERAMIC	0.0047UF	50V				
C7103	1-104-570-11	CERAMIC	0.001UF	10% 2KV				
C7104	1-107-662-11	ELECT	22UF	20% 250V				
C7105	1-162-918-11	CERAMIC CHIP	18PF	5% 50V				
C7106	1-126-768-11	ELECT	2200UF	20% 16V				
C7107	1-161-830-00	CERAMIC	0.0047UF	500V				
C7108	1-101-003-00	CERAMIC	0.0047UF	50V				
C7109	1-164-156-11	CERAMIC CHIP	0.1UF	25V				
C7110	1-164-156-11	CERAMIC CHIP	0.1UF	25V				
C7111	1-126-933-11	ELECT	100UF	20% 16V				
C7112	1-164-156-11	CERAMIC CHIP	0.1UF	25V				
C7113	1-101-003-00	CERAMIC	0.0047UF	50V				
C7114	1-162-966-11	CERAMIC CHIP	0.0022UF	10% 50V				
		CONNECTOR						
*	CN7102	1-564-509-11	PLUG, CONNECTOR	6P				
*	CN7103	1-564-510-11	PLUG, CONNECTOR	7P				
	CN7104	1-785-879-11	CONNECTOR, ONE TOUCH					
	CN7105	1-695-915-11	TAB (CONTACT)					
	CN7107	1-695-915-11	TAB (CONTACT)					
⚠	CN7108	1-251-182-11	SOCKET, CRT					

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CR **CG**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES									
RESISTOR																		
R7101	1-260-132-11	CARBON	560K	5%	1/2W	C7209	1-164-156-11	CERAMIC CHIP	0.1µF	25V								
R7102	1-216-813-11	RES-CHIP	220	5%	1/16W	C7210	1-126-933-11	ELECT	100µF	20%	16V							
R7103	1-218-693-11	METAL CHIP	1.1K	0.5%	1/16W	C7211	1-164-156-11	CERAMIC CHIP	0.1µF	25V								
R7104	1-218-696-11	METAL CHIP	1.5K	0.5%	1/16W	C7212	1-161-830-00	CERAMIC	0.0047µF	500V								
R7105	1-219-743-11	CARBON	100	5%	1/2W	C7213	1-101-003-00	CERAMIC	0.0047µF	50V								
R7106	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	C7214	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V							
R7107	1-260-133-11	CARBON	680K	5%	1/2W	C7215	1-164-156-11	CERAMIC CHIP	0.1µF	25V								
R7108	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	CONNECTOR												
R7109	1-216-815-11	RES-CHIP	330	5%	1/16W	CN7202	*1-564-509-11	PLUG,CONNECTOR	6P									
R7110	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	CN7203	*1-564-510-11	PLUG,CONNECTOR	7P									
R7111	1-218-709-11	METAL CHIP	5.1K	0.5%	1/16W	CN7204	*1-564-510-11	PLUG,CONNECTOR	7P									
R7112	1-218-748-11	METAL CHIP	220K	0.5%	1/16W	CN7205	1-785-879-11	CONNECTOR, ONE TOUCH										
R7113	1-218-748-11	METAL CHIP	220K	0.5%	1/16W	CN7206	1-695-915-11	TAB (CONTACT)										
R7114	1-215-925-11	METAL OXIDE	22K	5%	3W	CN7208	1-695-915-11	TAB (CONTACT)										
R7115	1-260-328-11	CARBON	1K	5%	1/2W	 CN7209	1-251-182-11	SOCKET, CRT										
R7116	1-216-829-11	RES-CHIP	4.7K	5%	1/16W													
R7117	1-260-087-11	CARBON	100	5%	1/2W	D7201	8-719-988-61	1SS355TE-17										
R7118	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	D7202	8-719-901-83	1SS83										
R7119	1-260-093-11	CARBON	330	5%	1/2W	D7203	8-719-901-83	1SS83										
R7120	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W	DIODE												
SPARK GAP												IC						
SG7101	1-519-422-11	GAP, SPARK				IC7201	8-759-680-01	TDA6120Q/N2/S1										
SG7102	1-517-729-31	GAP, SPARK				JUMPER RESISTOR												
SG7103	1-519-421-11	GAP, DISCHARGE				JC7201	1-216-864-11	SHORT										
CG												COIL						
*A-1332-241-A CG BOARD, COMPLETE												L7201	1-469-555-21	INDUCTOR	10µH			
4-382-854-11 SCREW (M3X10), P, SW (+) *7-651-000-50 GREASE,SILICON (G-746) 200G												L7202	1-469-555-21	INDUCTOR	10µH			
 NEON LAMP												NL7201	1-517-778-21					
CAPACITOR												TRANSISTOR						
C7201	1-164-156-11	CERAMIC CHIP	0.1µF		25V	Q7201	8-729-026-49	2SA1037AK-T146-R										
C7202	1-101-003-00	CERAMIC	0.0047µF		50V	Q7202	8-729-422-27	2SD601A-Q										
C7203	1-104-570-11	CERAMIC	0.001µF	10%	2KV	Q7203	8-729-048-50	2SK3018-T106										
C7204	1-107-662-11	ELECT	22µF	20%	250V	RESISTOR												
C7205	1-162-920-11	CERAMIC CHIP	27pF	5%	50V	RESISTOR												
C7206	1-101-003-00	CERAMIC	0.0047µF		50V	R7201	1-216-813-11	RES-CHIP	220	5%	1/16W							
C7207	1-126-768-11	ELECT	2200µF	20%	16V	R7202	1-218-693-11	METAL CHIP	1.1K	0.50%	1/16W							
C7208	1-164-156-11	CERAMIC CHIP	0.1µF		25V													

NOTE: The components identified by shading and \triangle mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CG **CB**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7203	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W			CONNECTOR			
R7204	1-260-132-11	CARBON	560K	5%	1/2W	CN7302	*1-564-509-11	PLUG,CONNECTOR	6P		
R7205	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	CN7303	*1-564-510-11	PLUG,CONNECTOR	7P		
R7206	1-219-743-11	CARBON	100	5%	1/2W	CN7304	*1-564-510-11	PLUG,CONNECTOR	7P		
R7207	1-218-690-11	METAL CHIP	820	0.50%	1/16W	CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			
R7208	1-260-133-11	CARBON	680K	5%	1/2W	CN7307	1-695-915-11	TAB (CONTACT)			
R7209	1-216-815-11	RES-CHIP	330	5%	1/16W	CN7308	1-695-915-11	TAB (CONTACT)			
R7210	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W	▲ CN7309	1-251-182-11	SOCKET, CRT			
R7211	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W						
R7212	1-218-746-11	METAL CHIP	180K	0.50%	1/16W						
R7213	1-218-746-11	METAL CHIP	180K	0.50%	1/16W			DIODE			
R7214	1-215-925-11	METAL OXIDE	22K	5%	3W	D7301	8-719-988-61	1SS355TE-17			
R7216	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	D7302	8-719-988-61	1SS355TE-17			
R7217	1-260-099-11	CARBON	1K	5%	1/2W	D7303	8-719-901-83	1SS83			
R7218	1-260-087-11	CARBON	100	5%	1/2W	D7304	8-719-901-83	1SS83			
R7219	1-260-093-11	CARBON	330	5%	1/2W			IC			
R7220	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W	IC7301	8-759-680-01	TDA6120Q/N2/S1			
SPARK GAP											
SG7201	1-519-422-11	GAP, SPARK						JUMPER RESISTOR			
SG7202	1-517-729-31	GAP, SPARK				JC7301	1-216-864-11	SHORT			
SG7203	1-519-421-11	GAP, DISCHARGE									
CB											
*A-1332-242-A CB BOARD, COMPLETE											
4-382-854-11 SCREW (M3X10), P, SW (+)											
*7-651-000-50 GREASE,SILICON (G-746) 200G											
CAPACITOR											
C7301	1-162-970-11	CERAMIC CHIP	0.01 μ F	10%	25V			TRANSISTOR			
C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	Q7301	8-729-026-49	2SA1037AK-T146-R			
C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	Q7302	8-729-026-49	2SA1037AK-T146-R			
C7304	1-101-003-00	CERAMIC	0.0047 μ F		50V	Q7303	8-729-422-27	2SD601A-Q			
C7305	1-104-570-11	CERAMIC	0.001 μ F	10%	2KV	Q7304	8-729-048-50	2SK3018-T106			
C7306	1-126-768-11	ELECT	2200 μ F	20%	16V			RESISTOR			
C7308	1-107-662-11	ELECT	22 μ F	20%	250V	R7301	1-249-393-11	CARBON	10	5%	1/4W
C7309	1-101-003-00	CERAMIC	0.0047 μ F		0V	R7302	1-216-822-11	RES-CHIP	1.2K	5%	1/16W
C7310	1-164-156-11	CERAMIC CHIP	0.1 μ F		25V	R7303	1-216-813-11	RES-CHIP	220	5%	1/16W
C7311	1-164-156-11	CERAMIC CHIP	0.1 μ F		25V	R7304	1-260-132-11	CARBON	560K	5%	1/2W
C7312	1-126-933-11	ELECT	100 μ F	20%	16V	R7305	1-216-817-11	RES-CHIP	470	5%	1/16W
C7313	1-164-156-11	CERAMIC CHIP	0.1 μ F		25V	R7306	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
C7314	1-164-156-11	CERAMIC CHIP	0.1 μ F		25V	R7307	1-219-743-11	CARBON	100	5%	1/2W
C7315	1-161-830-00	CERAMIC	0.0047 μ F		500V	R7308	1-216-809-11	RES-CHIP	100	5%	1/16W
C7316	1-101-003-00	CERAMIC	0.0047 μ F		50V	R7310	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W
C7317	1-162-966-11	CERAMIC CHIP	0.0022 μ F	10%	50V						

A **D**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES				
R857	1-216-838-11	RES-CHIP	27K	5%	1/16W			NETWORK RESISTOR					
R858	1-216-829-11	RES-CHIP	4.7K	5%	1/16W			RB1	1-233-576-11	RES, CHIP NETWORK 100			
R859	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W			RB2	1-233-576-11	RES, CHIP NETWORK 100			
R860	1-249-389-11	CARBON	4.7	5%	1/4W			RB3	1-233-576-11	RES, CHIP NETWORK 100			
R861	1-249-389-11	CARBON	4.7	5%	1/4W			RB4	1-233-576-11	RES, CHIP NETWORK 100			
R862	1-216-839-11	RES-CHIP	33K	5%	1/16W			RB5	1-233-576-11	RES, CHIP NETWORK 100			
R863	1-216-841-11	RES-CHIP	47K	5%	1/16W			RB6	1-233-576-11	RES, CHIP NETWORK 100			
R864	1-216-839-11	RES-CHIP	33K	5%	1/16W								
R865	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W								
R866	1-216-841-11	RES-CHIP	47K	5%	1/16W			TU1	8-598-430-50	TUNER, FSS BTF-FA401			
R867	1-216-837-11	RES-CHIP	22K	5%	1/16W			TU2	8-598-542-20	TUNER, FSS BTF-WA412			
R868	1-216-837-11	RES-CHIP	22K	5%	1/16W								
R869	1-216-834-11	RES-CHIP	12K	5%	1/16W								
R870	1-216-841-11	RES-CHIP	47K	5%	1/16W	X1		X1	1-577-110-11	VIBRATOR, CRYSTAL			
R871	1-216-809-11	RES-CHIP	100	5%	1/16W	X301		X301	1-567-505-11	OSCILLATOR, CRYSTAL			
R872	1-216-809-11	RES-CHIP	100	5%	1/16W	X302		X302	1-767-179-31	VIBRATOR, SERAMIC			
R873	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	X303		X303	1-567-505-11	OSCILLATOR, CRYSTAL			
R874	1-216-841-11	RES-CHIP	47K	5%	1/16W	X304		X304	1-767-179-31	VIBRATOR, SERAMIC			
R875	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	X305		X305	1-781-282-11	VIBRATOR, CERAMIC			
R876	1-216-841-11	RES-CHIP	47K	5%	1/16W	X306		X306	1-767-989-11	VIBRATOR, CERAMIC			
R877	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	X307		X307	1-760-895-21	VIBRATOR, CERAMIC			
R878	1-216-821-11	RES-CHIP	1K	5%	1/16W	X701		X701	1-579-358-21	VIBRATOR, CRYSTAL			
R879	1-216-821-11	RES-CHIP	1K	5%	1/16W								
R880	1-216-809-11	RES-CHIP	100	5%	1/16W								
R881	1-216-809-11	RES-CHIP	100	5%	1/16W								
R882	1-216-809-11	RES-CHIP	100	5%	1/16W								
R883	1-216-832-11	RES-CHIP	8.2K	5%	1/16W								
R884	1-216-833-11	RES-CHIP	10K	5%	1/16W								
R885	1-216-833-11	RES-CHIP	10K	5%	1/16W								
R886	1-216-833-11	RES-CHIP	10K	5%	1/16W								
R887	1-216-821-11	RES-CHIP	1K	5%	1/16W								
R888	1-216-849-11	RES-CHIP	220K	5%	1/16W	C8001		C8001	1-137-372-11	MYLAR	0.022μF	5%	50V
R889	1-216-807-11	RES-CHIP	68	5%	1/16W	C8002		C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
R890	1-216-807-11	RES-CHIP	68	5%	1/16W	C8003		C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
R891	1-216-807-11	RES-CHIP	68	5%	1/16W	C8004		C8004	1-104-666-11	ELECT	220μF	20%	25V
R892	1-216-837-11	RES-CHIP	22K	5%	1/16W	C8005		C8005	1-126-942-61	ELECT	1000μF	20%	25V
R893	1-216-857-11	RES-CHIP	1M	5%	1/16W	C8006		C8006	1-126-942-61	ELECT	1000μF	20%	25V
R895	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	C8007		C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
R896	1-216-864-11	SHORT				C8008		C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
R897	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8009		C8009	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V
R898	1-216-805-11	RES-CHIP	47	5%	1/16W	C8010		C8010	1-136-177-00	FILM	1μF	5%	50V
R899	1-216-821-11	RES-CHIP	1K	5%	1/16W	C8011		C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
						C8012		C8012	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V
						C8013		C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
						C8014		C8014	1-104-665-11	ELECT	100μF	20%	25V

D



A-1300-417-A D BOARD, COMPLETE

DG

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

A component identified by this  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8206	1-249-377-11	CARBON	0.47	5%	1/4W	C5007	1-164-645-11	CERAMIC	1000PF	10%	500V
R8208	1-260-288-11	CARBON	0.47	5%	1/2W	C5008	1-164-645-11	CERAMIC	1000PF	10%	500V
R8209	1-216-833-11	RES-CHIP	10K	5%	1/16W	C5009	1-126-953-11	ELECT	2200UF	20%	35V
R8210	1-216-809-11	RES-CHIP	100	5%	1/16W	C5010	1-126-953-11	ELECT	2200UF	20%	35V
R8211	1-215-906-11	METAL OXIDE	15	5%	3W	C5011	1-164-645-11	CERAMIC	1000PF	10%	500V
R8212	1-215-907-11	METAL OXIDE	22	5%	3W	C5012	1-164-645-11	CERAMIC	1000PF	10%	500V
R8213	1-216-821-11	RES-CHIP	1K	5%	1/16W	C5015	1-115-758-11	ELECT	470UF	20%	16V
R8216	1-216-833-11	RES-CHIP	10K	5%	1/16W	C5016	1-126-942-61	ELECT	1000UF	20%	25V
R8217	1-216-821-11	RES-CHIP	1K	5%	1/16W	C5017	1-126-942-61	ELECT	1000UF	20%	25V
R8218	1-260-123-11	CARBON	100K	5%	1/2W	C5018	1-126-952-11	ELECT	1000UF	20%	35V
R8219	1-249-377-11	CARBON	0.47	5%	1/4W	C5019	1-126-952-11	ELECT	1000UF	20%	35V
R8220	1-216-821-11	RES-CHIP	1K	5%	1/16W	C5020	1-110-626-11	ELECT	330UF	20%	160V
R8223	1-218-748-11	METAL CHIP	220K	0.5%	1/16W	C5021	1-115-771-51	ELECT	0.0047F	20%	16V
R8224	1-260-127-11	CARBON	220K	5%	1/2W	C5022	1-126-947-11	ELECT	47UF	20%	25V
R8225	1-260-292-11	CARBON	1	5%	1/2W	C5024	1-126-947-11	ELECT	47UF	20%	25V
R8228	1-260-314-11	CARBON	68	5%	1/2W	C5025	1-126-947-11	ELECT	47UF	20%	25V
R8230	1-218-751-11	METAL CHIP	300K	0.5%	1/16W	C5026	1-126-947-11	ELECT	47UF	20%	25V
TRANSFORMER											
T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)				C5027	1-126-951-11	ELECT	470UF	20%	35V
T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)				C5028	1-126-951-11	ELECT	470UF	20%	35V
T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)				C5029	1-107-639-11	ELECT	47UF	20%	160V
 T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)				C5030	1-126-947-11	ELECT	47UF	20%	25V
T8005	1-453-285-21	FBT ASSY, NX-4006//X4P4				C5031	1-126-768-11	ELECT	2200UF	20%	16V
THERMISTOR											
TH8001	1-800-193-00	THERMISTOR				C5038	1-126-947-11	ELECT	47UF	20%	25V
VARIABLE RESISTOR											
 VR8001	1-225-628-91	RES, VAR, ADJ,CERMET	5K			C5039	1-126-947-11	ELECT	47UF	20%	25V
 VR8002	1-225-632-91	RES, VAR, ADJ, CERMET	100K			C5040	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
G											
* A-1316-566-A G BOARD, COMPLETE											
1-533-223-11 HOLDER, FUSE											
* 4-374-846-01 COVER, CAPACITOR, CAP TYPE											
4-382-854-11 SCREW (M3X10), P, SW (+)											
CAPACITOR											
C5001	1-164-645-11	CERAMIC	1000PF	10%	500V	C6001	1-126-967-11	ELECT	47UF	20%	50V
C5002	1-164-645-11	CERAMIC	1000PF	10%	500V	C6002	1-104-666-11	ELECT	220UF	20%	25V
C5006	1-104-665-11	ELECT	100UF	20%	25V	C6004	1-126-967-11	ELECT	47UF	20%	50V
						C6008	1-117-228-11	MYLAR	2.2UF	10%	450V
						C6012	1-119-888-51	CERAMIC	2200PF	20%	250V
						C6013	1-119-888-51	CERAMIC	2200PF	20%	250V
						C6014	1-104-708-11	MYLAR	0.47UF	20%	250V
						C6015	1-161-964-91	CERAMIC	0.0047UF	20%	250V
						C6016	1-161-964-91	CERAMIC	0.0047UF	20%	250V

SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

CORRECTION - 2

**SUBJECT: ELECTRICAL PARTS LIST
U BOARD P/N CORRECTION**

Correct the service manual as shown.
File this Correction with the service manual.

: Corrected Item

Section 8: Electrical Parts List (Page 106)

INCORRECT

CORRECT

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
*	A-1373-851-A	U BOARD, COMPLETE	*	A-1373-870-A	U BOARD, COMPLETE



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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

CORRECTION - 3

SUBJECT: EXPLODED VIEW PARTS LIST CORRECTION

Correct the service manual as shown.
File this Correction with the service manual.

: Corrected Item

Section 7: Exploded View (Page 95)

7-1. Cover

INCORRECT			CORRECT		
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
5	*4-084-568-01	HOLDER, SCREEN (57HW40)	5	*4-084-568-12	HOLDER, SCREEN (57HW40)
5	*4-084-617-01	HOLDER, SCREEN (51HW40)	5	*4-084-617-12	HOLDER, SCREEN (51HW40)
7	*4-084-568-11	HOLDER, SCREEN (57HW40)	7	*4-084-568-02	HOLDER, SCREEN (57HW40)
7	*4-084-617-11	HOLDER, SCREEN (51HW40)	7	*4-084-617-02	HOLDER, SCREEN (51HW40)

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SECTION 7

EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

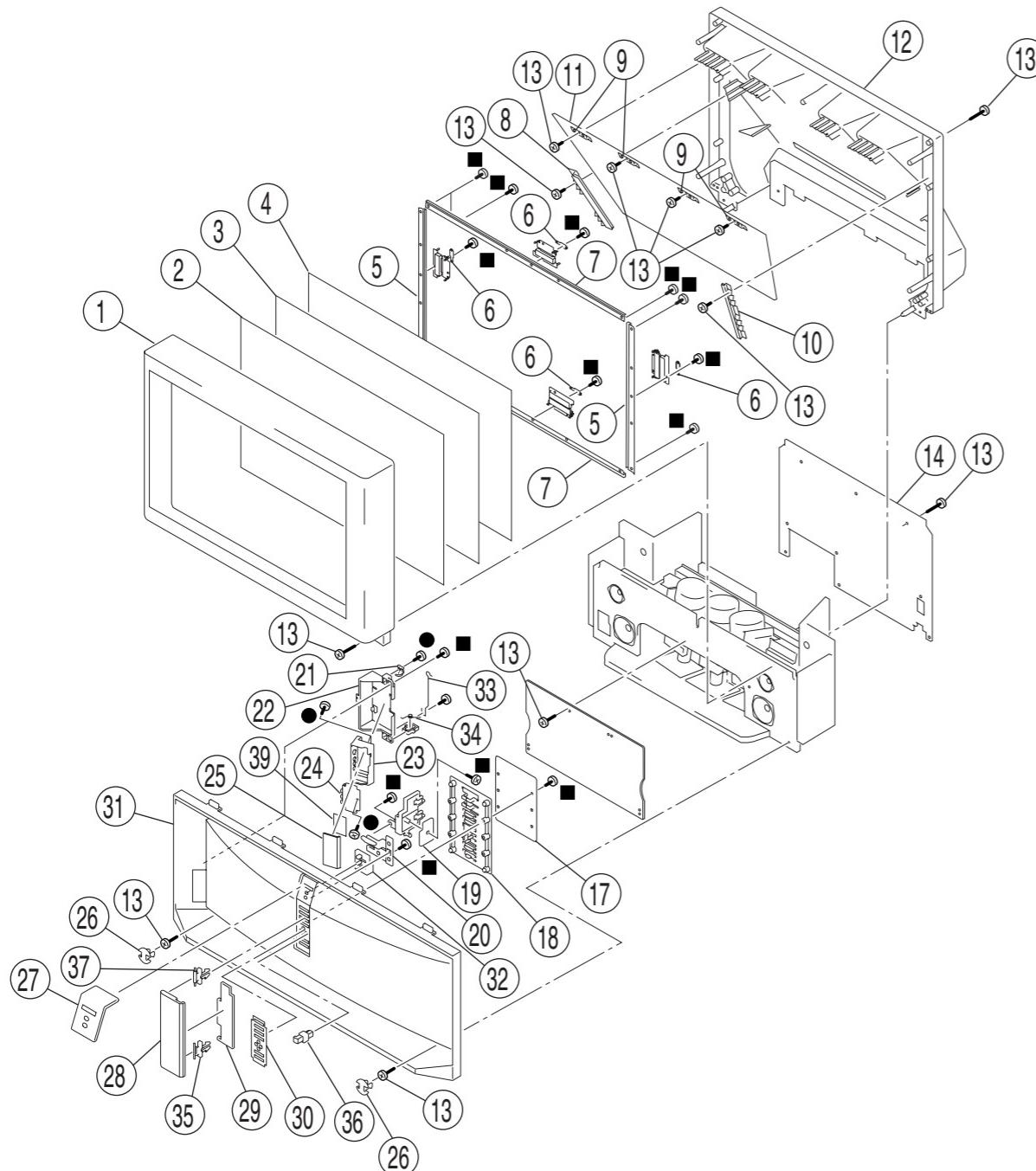
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. COVER

- +BVTP 3X12 7-685-648-79
- +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4039-325-1	BEZEL (57) ASSY (57HW40)		17	* A-1372-932-A	H2 BOARD, COMPLETE	
	X-4039-331-1	BEZEL (51) ASSY (51HW40)		18	4-082-284-01	BUTTON, MULTI	
2	4-081-951-11	SCREEN (57W), CONTRAST (57HW40)		19	* A-1377-041-A	H1 BOARD, COMPLETE (VAR)	
	4-081-954-11	SCREEN (51W), CONTRAST (51HW40)		20	4-082-283-01	BUTTON, POWER	
3	4-081-949-11	PLATE (57WL), DIFFUSION (57HW40)		21	4-919-393-01	DAMPER	
	4-081-952-11	PLATE (51WL), DIFFUSION (51HW40)		22	4-082-289-01	HOLDER, FRONT TERMINAL	
4	4-081-950-11	PLATE (57WFV), DIFFUSION (57HW40)		23	4-082-288-02	BRACKET, H3	
(5)	4-081-953-11	PLATE (51WFV), DIFFUSION (51HW40)		24	* A-1372-933-A	H3 BOARD, COMPLETE	
	* 4-084-568-12	HOLDER, SCREEN (57HW40)		25	4-083-468-01	DOOR, FRONT TERMINAL	
	* 4-084-617-12	HOLDER, SCREEN (51HW40)		26	4-083-503-01	SCREW CAP, GRILLE	
6	* A-1391-148-A	S BOARD, COMPLETE		27	4-083-732-01	PANEL (HW), FRONT	
(7)	* 4-084-568-02	HOLDER, SCREEN (57HW40)		28	4-083-730-01	DOOR (HW), CONTROL	
	* 4-084-617-02	HOLDER, SCREEN (51HW40)		29	4-083-731-01	COVER (HW), CONTROL DOOR	
8	* 4-083-460-01	HOLDER (L), MIRROR SIDE (51HW40)		30	4-084-571-01	LABEL (HW), CONTROL	
	* 4-083-462-01	HOLDER (L), MIRROR SIDE (57HW40)		31	X-4039-326-1	GRILLE ASSY, SPEAKER (57HW40)	
9	* 4-081-501-01	HOLDER, MIRROR			X-4039-332-1	GRILLE ASSY, SPEAKER (51HW40)	
10	* 4-083-459-01	HOLDER (R), MIRROR SIDE (51HW40)		32	4-083-733-01	GUIDE (HW), LED	
	* 4-083-461-01	HOLDER (R), MIRROR SIDE (57HW40)		33	4-084-564-01	SPRING (H3)	
11	4-084-561-01	MIRROR (57) (57HW40)		34	4-083-505-01	SPRING, DOOR	
	4-084-615-01	MIRROR (51) (51HW40)		35	3-703-035-11	SHAFT, LID	
12	* 4-083-466-01	COVER (57), MIRROR (57HW40)		36	4-042-192-01	CATCHER, PUSH	
	* 4-083-467-01	COVER (51), MIRROR (51HW40)		37	4-045-250-01	DAMPER	
13	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20		38	4-082-290-01	LABEL, FRONT TERMINAL	
14	* 4-084-577-01	BOARD, REAR (57HW40)					
	* 4-084-622-01	BOARD (51), REAR (51HW40)					

9-965-434-93

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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

CORRECTION - 4

**SUBJECT: ELECTRICAL PARTS LIST
P/N CORRECTION ON D BOARD**

Correct the service manual as shown.
File this Correction with the service manual.

 : Corrected Item

Section 8: Electrical Parts List (Page 125)

INCORRECT

REF. NO.	PART NO.	DESCRIPTION
D8002	8-719-110-17	RD20ES-B2

CORRECT

REF. NO.	PART NO.	DESCRIPTION
	D8002	8-719-110-53
		RD20ES-B2

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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

CORRECTION - 5

**SUBJECT: ELECTRICAL PARTS LIST
P/N CORRECTION/ADDITION ON G BOARD**

Correct the service manual as shown.
File this Correction with the service manual.

: Corrected Item

Section 8: Electrical Parts List (Page 98)
G Board (Pages 128-130)

INCORRECT

REF. NO.	PART NO.	DESCRIPTION
IC5006	8-759-504-46	PQ05RF-1
Needs to be Added	----->	
Needs to be Added	----->	

CORRECT

REF. NO.	PART NO.	DESCRIPTION
IC5006	8-759-069-28	PQ05RF-11
D5027	8-719-069-54	UDZSTE-175.1B
R5048	1-216-833-11	METAL CHIP 10K 5% 1/10W

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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-51HW40	RM-Y909	US	SCC-P65G-A
KP-51HW40	RM-Y909	Canadian	SCC-P65G-A
KP-57HW40	RM-Y909	US	SCC-P65F-A
KP-57HW40	RM-Y909	Canadian	SCC-P65F-A

SUPPLEMENT - 2

SUBJECT: NOTE ADDED TO CLARIFY CRT USAGE

Correct the service manual as shown.

File this Supplement with the service manual.

Please refer to the following note when ordering CRT's:

For S/N's 97000001-98XXXXXX use P/N's on Page 97 of original manual for part replacement.

A-1502-021-A	Coupler (R) Assy, CRT (57HW40)
A-1502-023-A	Coupler (R) Assy, CRT (51HW40)
A-1502-025-A	Coupler (G) Assy, CRT
A-1502-022-A	Coupler (B) Assy, CRT (57HW40)
A-1502-024-A	Coupler (B) Assy, CRT (51HW40)

For S/N's 90000001-90XXXXXX, use P/N's listed on Supplement-1

8-733-648-05	CRT 07MVC41(R) - L (VM) (57HW40)
8-733-650-05	CRT 07MVC31(R) - L (VM) (51HW40)
8-733-652-05	CRT 07MVC21(G) - L
8-733-647-05	CRT 07MVC41(B) - L (VM) (57HW40)
8-733-649-05	CRT 07MVC31(B) - L (51HW40)

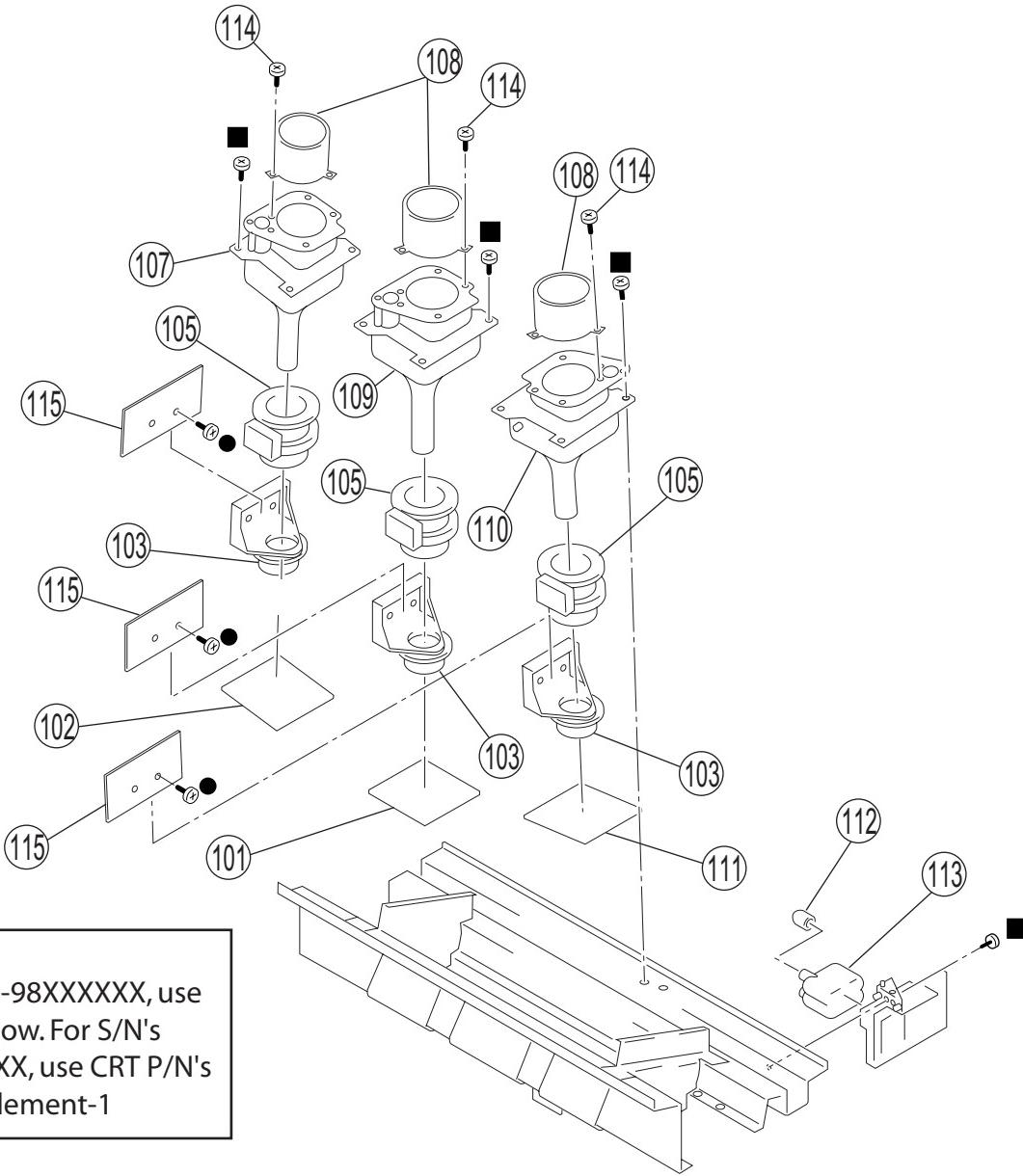
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7-3. PICTURE TUBE

: +BVTP 3X12 7-685-648-79
 : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK
101	* A-1332-241-A	CG BOARD, COMPLETE	
102	* A-1332-240-A	CR BOARD, COMPLETE	
△ 103	1-451-535-11	COIL ASSY, VM	
△ 105	1-451-537-11	DEFLECTION YOKE	
△ 107	A-1502-021-A	COUPLER (R) ASSY, CRT (57HW40)	
△	A-1502-023-A	COUPLER (R) ASSY, CRT (51HW40)	
108	4-083-750-01	LENS (DELTA 260)(57HW40)	
	4-083-751-01	LENS (DELTA 250)(51HW40)	
△ 109	A-1502-025-A	COUPLER (G) ASSY, CRT	
△ 110	A-1502-022-A	COUPLER (B) ASSY, CRT (57HW40)	
△	A-1502-024-A	COUPLER (B) ASSY, CRT (51HW40)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
111	* A-1332-242-A	CB BOARD, COMPLETE	
112	4-373-137-01	CAP (Z), RUBBER	
△ 113	8-598-955-31	BLOCK ASSY, HV HVB-1031	
114	4-052-894-01	SCREW (4X20), HEAD TAPPING	
115	* A-1342-598-A	V BOARD, COMPLETE	

SECTION 7: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

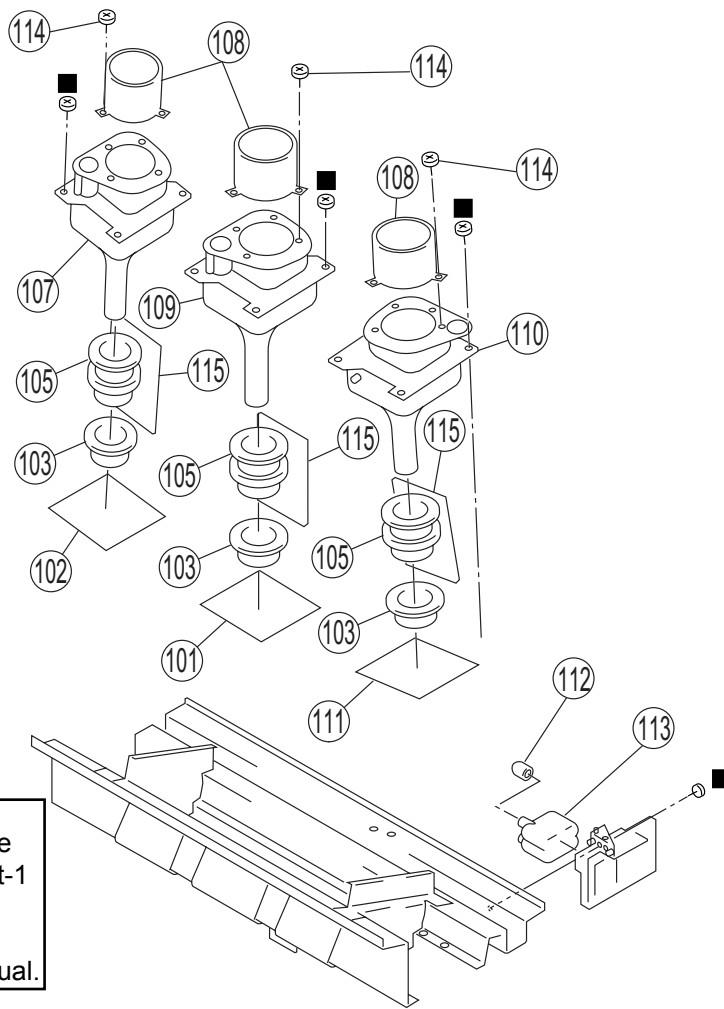
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and  mark are critical for safety.
Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-3. PICTURE TUBE

■ 7-685-650-79 SCREW +BVTP 3X16



NOTE:
For S/N's 90000001-90XXXXXX, use
CRT P/N's referred to in Supplement-1
(listed below)
For S/N's 97000001-98XXXXXX,
use CRT P/N's listed in original manual.

REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
101*	A-1332-241-A	CG BOARD, COMPLETE		114	4-052-894-01	SCREW (4X20) , HEAD TAPPING	
102*	A-1332-240-A	CR BOARD, COMPLETE		115*	A-1342-598-A	V BOARD, COMPLETE	
△103	1-452-790-31	2P/4P MAGNET ASSY.					
△105	1-451-537-21	DEFLECTION YOKE					
△107	8-733-648-05	CRT 07MVC41 (R) - L (VM) (57HW40)					
(→)△107	8-733-650-05	CRT 07MVC31 (R) - L (VM) (51HW40)					
108	4-083-750-01	LENS (DELTA 260) (57HW40)					
108	4-083-751-01	LENS (DELTA 250) (51HW40)					
(→)△109	8-733-652-05	CRT 07MVC21 (G) - L (VM)					
(→)△110	8-733-647-05	CRT 07MVC41 (B) - L (VM) (57HW40)					
(→)△110	8-733-649-05	CRT 07MVC31 (B) - L (VM) (51HW40)					
111*	A-1332-242-A	CB BOARD, COMPLETE					
112	4-373-137-01	CAP (Z) , RUBBER					
△113	8-598-955-31	BLOCK ASSY, HV HVB- 1031					